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June 29, 2007

The Honorable Chairman and Members of the  
Hawaii Public Utilities Commission  
465 South King Street  
Kekuanaoa Building, 1<sup>st</sup> Floor  
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2006-0386  
HECO 2007 Test Year Rate Case – June 2007 Updates – Set #3

PUBLIC UTILITIES  
COMMISSION

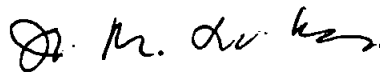
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Enclosed is the third set of updates to Hawaiian Electric Company, Inc.'s ("HECO") 2007 test year estimates reflected in the Application, Direct Testimonies, Exhibits and Workpapers filed with the Commission on December 22, 2006. This set includes updates to the following:

- HECO T-6 – Dan V. Giovanni
- HECO T-7 – Robert K. S. Y. Young
- HECO T-8 – Darren S. Yamamoto
- HECO T-14 – Faye Chiogioji (revised update)
- HECO T-15 – Lon K. Okada
- HECO T-17 – Gayle T. Ohashi

Very truly yours,

  
(fn) Dean K. Matsuura  
Director, Regulatory Affairs

Enclosure

cc: Division of Consumer Advocacy  
Sawvel & Associates, Inc.  
Utilitech, Inc.  
Dr. Khojasteh Davoodi  
Ralph Smith, Larkin & Associates  
Randall Y.K. Young, Esq. (w/o enclosure)

JUNE 2007 UPDATE

**Ref: D. Giovanni, HECO T-6, Production O&M Expense, Production Inventory.**

**HECO Response:**

For HECO T-6 an adjustment to increase the 2007 Test Year Other Production Operations and Maintenance (“O&M”) expense by \$703,000 is being made. This adjustment is the net of:

1. Emissions Fee expense	(\$147,000)
2. Distributed Generator/Dispatchable Standby Generator expense	(\$55,000)
3. Ho’Okina expense	(\$42,000)
4. Environmental 316(b) expense	\$1,006,000
5. Generation Bidding expense	\$309,000
6. Administrator Position expense	\$38,000
7. Fuel Infrastructure expense	\$39,000
8. Engineer Retention Program expense	\$65,000
9. Distributed Generator Outside Service expense	(\$185,000)
10. Operator Overtime expense	<u>(\$325,000)</u>
Net Adjustment	<u>\$703,000</u>

The adjustments are summarized in Attachment 1 to this update. The discussions below will provide greater detail on the updates and the financial impacts these changes have to the Other Production O&M 2007 test year estimate.

EMISSIONS FEE EXPENSE UPDATE

The adjustment to Emissions Fee expense is a decrease in Production Operations Non-labor expense of \$147,000 as shown in Attachment 1, page 1 and page 2.

The Emissions Fee recalculation was explained in HECO T-6 CA-IR-2, Attachment 7, page 3 and 4, and Attachment 7B. The total Emissions Fee was reduced by \$192,000 from \$1,090,000 to \$898,000. Because this fee was normalized, as discussed in HECO T-6, page 58-59, the normalized amount has been recalculated also and is reduced by \$45,000 from \$252,000 to \$207,000. The net of the Emissions Fee adjustment is \$147,000 (i.e., \$192,000 minus \$45,000) in Production Operations non-labor expense as shown in Attachment 1, page 2, of this update. HECO's updated test year estimate for emissions fee is \$691,000. The calculation for the Emissions Fee expense adjustment and normalization correction is shown in Attachment 2 to this update.

DISTRIBUTED GENERATION/DISPATCHABLE STANDBY  
GENERATION EXPENSE UPDATE

The expense adjustment for Distributed Generation (DG)/Dispatchable Standby Generation (DSG) O&M expense is a decrease in Production Operations Non-labor of \$55,000 due to the removal of DSG expenses as a result of the cancellation of the Kaiser DSG project. (Refer to Attachment 1, page 3, of this update and the responses to CA-IR-237 and CA-IR-337.) The expenses to be removed are all DSG non-labor expenses reflected for expense elements 201 and 501 on CA-IR-3, Attachment 1, page 2, and include the following:

1. DG Maintenance	EE 501	\$ 6,800
2. DSG Incentive	EE 501	\$24,600
3. Phone	EE 501	\$ 3,200

4. Annual Source Test	EE 501	\$ 3,000
5. Catalyst	EE 201	\$ 8,300
6. NCS Air Permit fee	EE 501	\$ 1,500
7. DSG Monitoring Software	EE 501	\$ 5,000
8. Refueling Outside Service	EE 501	<u>\$ 2,200</u>
	Total	<u>\$54,600</u>

No labor expense was included in HECO's 2007 test year expenses for DSG.

#### HO'OKINA EXPENSE UPDATE

The adjustment for Ho'okina expense is a decrease of \$42,000 in Production Operations Non-labor as shown in Attachment 1, page 1 and page 4. The Ho'okina volunteer award recognition program has been suspended as a result of implementing a targeted compensation program as explained in HECO's response to CA-IR-69. The resulting reduction to the 2007 test year Production O&M Non-labor expenses is a reduction of \$42,000. (Please refer to HECO-WP-101(G), page 887; HECO-1220; and Attachment 1, page 4, to this update.)

#### ENVIRONMENTAL 316(b) EXPENSE UPDATE

For HECO T-6, an adjustment to increase the 2007 Test Year expense for Production Operations Non-labor by the 3-year normalized amount of \$1,006,000 will be made for Clean Water Act Section 316(b) compliance expenses. (Refer to Attachment 1, page 5, to this update.)

In 2004, the Environmental Protection Agency (EPA) established national Clean Water Act Section 316(b) Phase II rules regulating the use of cooling water intake systems by large, existing power producing facilities, including HECO's Kahe, Waiau and Honolulu generating facilities. These rules were intended to ensure that the location, design, construction and



capacity of cooling water intake structures reflect the best technology available to protect aquatic organisms from being killed or injured by impingement or entrainment.

Until May 1, 2007, Clean Water Act (CWA) Section 316(b) environmental compliance costs for Kahe, Waiau and Honolulu power plants were accumulating in a Power Supply preliminary engineering work order number (PEWON) account in expectation that capital projects would be needed and that these expenses would likely be included in such capital projects. Accumulated charges include the following amounts:

1. January 18, 2005 through April 30, 2007

a. Honolulu Power Plant	\$269,000
b. Waiau Power Plant	\$314,000
c. Kahe Power Plant	<u>\$279,000</u>

Total	<u>\$861,000</u> (See Attachment 3 to this update)
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2. 2007 PEWON account costs (i.e., collected from January 1, 2007 to April 30, 2007 and included in the \$861,000 above) to be cleared in 2007 amount to \$311,000. (See Attachment 4 to this response.)

Due to a decision by the United States Court of Appeals for the Second Circuit on January 25, 2007, existing CWA Section 316(b) compliance options were remanded back to the Environmental Protection Agency (EPA) for further consideration. EPA was granted an extension in order to request a rehearing by the Second Circuit or to appeal the court's decision to the United States Supreme Court. Accordingly, the EPA has suspended the CWA Section 316(b) rule and instructed state regulators to use Best Professional Judgment (BPJ) in managing CWA Section 316(b) requirements under affected facilities' National Pollutant Discharge

Elimination System (NPDES) permits. Due to the uncertainties raised by the Second Circuit's decision, EPA's pending response, and the state regulators' (i.e., Hawaii State Department of Health (HDOH)) forthcoming actions, HECO is unable to predict which compliance options may be necessary or applicable at HECO's facilities. However, since the HDOH incorporated EPA's CWA Section 316(b) compliance requirements into HECO's existing NPDES permits for the Kahe, Waiau and Honolulu Power Plants, HECO is still obligated to comply with existing permit conditions. HECO intends to request permit revisions with HDOH and negotiate BPJ provisions until such time as the EPA takes final action in response to the court's decision.

On April 3, 2007, an accounting decision was made by HECO to transfer the accumulated CWA Section 316(b) costs as of April 30, 2007 from the Power Supply PEWON account to the Power Supply clearing account. In addition, effective May 1, 2007, all future CWA Section 316(b) compliance costs for Kahe, Waiau, and Honolulu Power Plants will be captured as a Production O&M Non-labor expense. These compliance costs were not previously forecasted as a Production O&M expense. Compliance work in 2007, 2008, and 2009 is designed to be compliant with HECO's best understanding of CWA Section 316(b) requirements in the wake of the Second Circuit's decision, and was developed in consultation with HECO's consultants, EPRI Solutions and Tenera Environmental.

Projected outside consulting costs for CWA Section 316(b) permit compliance and permit modification negotiations with HDOH at Kahe, Waiau and Honolulu Power Plants, for the period May 1 to December 31, 2007, are currently estimated to be \$738,000 (see Attachment 5). These activities include fish and invertebrate impingement and entrainment monitoring, data processing and evaluation, closed cycle cooling evaluation, best professional judgment

evaluation and fish protection technologies, and operational measures reviews. Projected compliance activities for 2008 and 2009 include continued impingement and entrainment monitoring, data analysis, fish protection technologies research and pilot tests, dominant species (fish and invertebrates) life history research, and track/comment on EPA proposed rules. (See Attachment 6 to this update for cost details.) Thus, the total expense directly related to 2007 is \$1,049,000, including \$311,000 for 2007 PEWON account costs (for January 1, 2007 to April 30, 2007) to be cleared in 2007, and \$738,000 (estimated for May 1 to December 31, 2007.) Expenses for 2007, 2008, and 2009 were averaged to determine the 3-year normalized amount of \$1,006,000 for Environmental 316(b) expenses, as shown in Attachment 6.

#### GENERATION BIDDING DIVISION EXPENSE UPDATE

The Generation Bidding Division expense update is an increase of \$309,000 in Production Operations. The Labor total is \$66,000 and the Non-labor is \$243,000, as shown in Attachment 1, page 6.

As stated in HECO's response to CA-IR-68, on January 22, 2007, the Power Supply Process Area implemented a reorganization to create the Power Supply System Planning Department and reorganize functions in the Power Supply Services Department. The objectives for the reorganization were three fold. First, it was necessary to dedicate resources to support the implementation of the Commission's Decision and Order No. 23121, dated December 8, 2006 (Docket No. 03-0372) adopting the Framework for Competitive Bidding ("Framework") for the acquisition of new generating resources. Second, with the Company initiative to procure biofuels for the proposed Campbell Industrial Park Generating Unit and other generating units on the MECO and HELCO systems, the reorganization creates the focused team necessary to

manage existing and new fuel infrastructure and systems, new supply relationships and the increased operational complexity associated with the requirements of a new fuel. Third, financial administration of O&M expenses is being consolidated in one group in the PSO&M Department, where the majority of the O&M expenses are incurred.

### **System Planning Department**

As a result of the reorganization, the Generation Planning Division and the Transmission Planning Division moved from the Power Supply Services Department to the new System Planning Department, and a new division called Generation Bidding was created within the System Planning Department. The position of Manager, System Planning Department, was filled by the internal transfer of the then Manager of the Power Supply Services Department. The organizational structure of the new System Planning Department is depicted in Attachment 1 to the response to CA-IR-68.

The new Generation Bidding Division will lead the competitive bidding effort for HECO, HELCO, and MECO, which will include the development and implementation of new competitive bidding processes and activities to ensure that the acquisition of new generating resources complies with the Framework. The Generation Bidding Division will coordinate the efforts of various cross-functional teams in the implementation of competitive bidding processes and will interface with the Commission, the Consumer Advocate, independent observers, and prospective bidders in these processes.

The new Generation Bidding Division will consist of a Generation Bidding Director and two staff project managers. All three of these positions are new, for a net gain of three (3) new positions in the Power Supply Process Area within the System Planning Department.

The net adjustment to the 2007 test year estimate of Other Production O&M Expense – Labor and Non-labor for the new Generation Bidding Division (i.e., expenses associated with a net gain of three new positions in the System Planning Department, and the anticipated normalized expense for outside services to support required competitive bidding activities) is \$309,000. This net adjustment consists of Labor and Non-labor components as shown below.

Net Adjustment to 2007 Other Production O&M Expense (for Competitive Bidding)

Labor	\$ 66,000
Non-labor	<u>\$243,000</u>
Total	<u>\$309,000</u>

The original 2007 test year estimate included \$175,000 for Non-labor expense. This estimated expense was included in the 2007 budget for the Power Purchase Division of the Power Supply Services Department (see HECO response to CA-IR-239, and HECO response to CA-IR-2, HECO T-6, Attachment 12B, page 2). The updated 2007 test year estimate, including the net adjustment for competitive bidding, is summarized below:

2007 Other Production O&M Expense including Net Adjustment (for Competitive Bidding)

Labor	\$ 66,000
Non-labor	<u>\$418,000</u> (including \$175,000 in the original 2007 test year estimate)
Total	<u>\$484,000</u>

The derivations of these amounts are described in greater detail in the subsections below. As described, these values were derived in three steps. First, the estimates for 2007 Other Production Expenses - Labor were updated and adjusted. Second, the estimates for 2007 Other

Production Expense – Non-Labor were updated and adjusted. Third, the updated and adjusted 2007 Other Production Expense - Non-Labor were normalized for the 2007 to 2009 time period.

**Other Production O&M Expense – Labor (Updated and Adjusted 2007).** The Generation Bidding Director position was filled effective June 2007, and the two project manager positions are expected to be filled by July 2007. For purposes of simplification, the HECO Other Production O&M Expense – Labor of \$66,000 is based on one-half year labor expense forecast in 2007 for the three new positions in the Generating Bidding Division, net of costs allocated to MECO and HELCO. (See Attachment 7 to this update.) The division will require a staff of at least two project managers in addition to the Director, as it is anticipated that multiple competitive bidding processes across HECO, HELCO and MECO may progress concurrently. For example, as discussed in Section 4.2.5 in the HECO IRP-3 Evaluation Report filed with the Commission on May 31, 2007 (Docket No. 03-0253), HECO announced its intent to issue on or about year-end 2007 a Request for Proposals (“RFP”) for a block of approximately 100 MW of non-firm renewable energy. Preliminary work on this effort is already underway. At the same time, as a part of MECO’s Action Plan discussed in Section 12.2.5.1 of the MECO IRP-3 Plan filed with the Commission on April 30, 2007 (Docket No. 04-0077), MECO is immediately proceeding with steps to conduct a competitive bidding process for the commercial operation of the next two blocks of firm capacity needed in 2011 and 2013, respectively. Staff of the new Generation Bidding Division will be leading both of these efforts.

The Other Production O&M Expense – Labor of \$66,000 takes into account that fifty percent (50%) of the combined labor expense for the three new positions will be charged to HECO, and forty percent (40%) to MECO and ten percent (10%) to HELCO via inter-company

billing for direct staff support of the aforementioned MECO competitive bid. Further, with competitive bidding as the required mechanism for acquiring or building new energy generation in Hawaii, additional RFPs will undoubtedly follow these initial two efforts as the Integrated Resource Planning process continues to identify and scope future resource needs and related RFPs for all three of the HECO utilities.

For the Other Production O&M Expense – Labor, the recurring expenses are estimated to be \$132,000 (\$2007), but no annualization adjustment is being applied. Relative to the original test year estimate for 2007 Other Production O&M Expense – Labor of zero, the net adjustment is an increase of \$66,000.

**Other Production O&M Expense – Non-Labor (Updated and Adjusted 2007).** The original 2007 test year estimate for Other Production O&M Expense – Non-labor associated with competitive bidding activities is the previously mentioned \$175,000. At the time the 2007 test year estimate was being developed in 2006, the Commission had not yet adopted the Framework, and accordingly, HECO had not yet implemented the reorganization to create the System Planning Department and dedicated Generation Planning Division within that department. While there was uncertainty regarding the Commission’s resolution of specific elements of the competitive bidding process, HECO anticipated the need to hire a consultant to assist in implementing the mandated process and estimated the expense for that effort at \$175,000.

Following the Commission’s adoption of the Framework in December 2006, the Power Supply process area was subsequently reorganized to include a new Systems Planning Department and a Generation Bidding Division within that department. The 2007 Other Production O&M non-labor expense for competitive bidding was reviewed and increased by

\$120,000 from \$175,000 to \$295,000. (See Attachment 8 to this update.) The updated and adjusted 2007 Other Production O&M Expense – Non-labor for competitive bidding is summarized as follows:

Updated and Adjusted 2007 Other Production Expense – Non-labor (for Competitive Bidding)

Framework Requirements	\$ 25,000
Outside Consultant	\$150,000
Outside Legal	\$ 60,000
Independent Observer	<u>\$ 60,000</u>
Updated and Adjusted 2007 Non-labor Expense	<u>\$295,000</u>

These amounts are net of estimated billings to MECO and HELCO.

**Normalized Other Production O&M Expenses – Non-labor for Competitive Bidding.** The competitive bidding process mandated by the Commission’s Framework adopted in December, 2006, is being launched in 2007 and is expected to be fully operational for HECO, MECO, and HELCO over the 2007 to 2009 time period.

The Other Production O&M Expense – Non-Labor is estimated to be different in each year, however, and is normalized by averaging the estimated annual estimated expenses for the three-year period. The Other Production O&M Expense – Non-Labor is comprised of four major components (i.e., Framework Requirements, Outside Consultant, Outside Legal, and Independent Observer) and the normalization treatment for each is presented below.

1. **Framework Requirements.** The Framework Requirements item consists of outside consulting and/or legal expenses to meet requirements directed by Commission order and/or in the Framework as a prerequisite to initiate the competitive bidding mechanism in Hawaii



(e.g. HECO's preparation and submission for Commission approval of (1) proposed tariffs governing interconnection and transmission upgrades, (2) a proposed code of conduct, and (3) a list of candidate Independent Observers). These start-up activities will be completed in 2007 and will have value over the normalization period. The updated and adjusted 2007 Other Production Expense – Non-labor for the Framework Requirements is \$25,000. (See Attachment 8; sum of \$15,000 for Outside Consultant and \$10,000 for Outside Legal.) The estimated expense is zero for this item in years 2008 and 2009. Thus, the normalized 2007 test year estimated expense for Framework Requirements is \$8,000 (i.e.  $\$25,000/3$ ), and the normalization adjustment for Framework Requirements in 2007 is minus \$17,000 (i.e.,  $\$8,000 - \$25,000 = -\$17,000$ )

2. **Outside Consultant.** HECO is a relatively small electric utility company with limited in-house resources and anticipates the need to rely on outside consulting services to effectively and efficiently implement the competitive bidding processes. As noted previously, HECO is initiating action to conduct an RFP seeking approximately 100 MW of non-firm renewable energy and has contracted with an outside consultant experienced in such matters to assist and advise in the process. The updated and adjusted 2007 Other Production Expense – Non-labor for Outside Consultant expenses is \$150,000. HECO similarly estimated an annual expense of \$150,000 in 2008 and 2009 for Outside Consultant expenses, and thus, the normalization adjustment for Outside Consultant expenses in 2007 is zero. (See Attachment 8 to this update.)
3. **Outside Legal.** HECO anticipates that outside legal services will be required in many activities throughout the competitive bidding process, such as but not limited to preparation

of power purchase and other forms of contract, review of RFP material, advice on communication with bidders and regulatory compliance, and preparation of regulatory filings and representation in related proceedings. The updated and adjusted 2007 Other Production Expense – Non-labor for Outside Legal expenses is \$60,000. HECO estimates an annual expense of \$150,000 in 2008 and 2009 for Outside Legal expenses. Thus, the normalized 2007 test year estimated expense for Outside Legal expenses is \$120,000 (i.e.,  $(\$60,000 + \$150,000 + \$150,000)/3 = \$360,000/3$ ) and the normalization adjustment for Outside Legal expenses is plus \$60,000 (i.e., \$120,000 minus \$60,000). (See Attachment 8 to this update.)

4. **Independent Observer.** The role of the Independent Observer is set forth in Section III.C. of the Framework (at pages 13 through 16). Under the Framework, an Independent Observer is required whenever the utility or its affiliate seeks to advance a project proposal (i.e., in competition with those offered by bidders) in response to a need that is addressed by its RFP, or when the Commission otherwise determines. HECO anticipates utilizing an Independent Observer for its proposed 100 MW non-firm renewable energy RFP, although it is not anticipated that HECO or its affiliate will bid, to among other matters assist and advise in the conduct of this new process and report on the progress and results to the Commission. The updated and adjusted 2007 Other Production Expense – Non-labor for the Independent Observer expense is \$60,000. HECO estimates an annual expense of \$180,000 in 2008 and \$180,000 in 2009 for the Independent Observer expense. Thus, the normalized 2007 test year estimated expense for the Independent Observer is \$140,000 (i.e.,  $(\$60,000 + \$180,000 + \$180,000)/3 = \$420,000/3$ ) and the normalization adjustment for the

Independent Observer expense is plus \$80,000 (i.e. \$140,000 minus \$60,000). (See Attachment 8 to this update.)

Based on the analyses described above, the Normalized 2007 Other Production O&M Expense – Non-labor for Competitive Bidding activities is \$418,000. The original 2007 test year estimate included \$175,000 for Other Production O&M Expense – Non-labor for competitive bidding. The net adjustment to the original 2007 test year estimate for Other Production O&M Expense – Non-labor for competitive bidding is \$243,000 (i.e., \$418,000 minus \$175,000). (See Attachment 7 to this update.)

Normalized 2007 Other Production Expense – Non-labor (for Competitive Bidding)

Framework Requirements	\$ 8,000
Outside Consultant	\$150,000
Outside Legal	\$120,000
Independent Observer	\$140,000
Normalized 2007 Non-labor Expense	\$418,000
Less Original 2007 Non-labor Expense Estimate	- <u>\$175,000</u>
Adjustment (net)	<u>\$243,000</u>

ADMINISTRATOR POSITION EXPENSE UPDATE

The expense adjustment for the Administrator position is an increase of \$38,000 in Production O&M Operations Labor, as shown in Attachment 1, page 1 and page 7.

Financial administration of O&M expenses is being consolidated in one group in the PSO&M Department, where the majority of the O&M expenses are incurred. Financial administration of O&M expenses for the Power Supply (“PS”) process area was previously

shared among Administrators in the Power Supply Engineering and Power Supply Services (“PSS”) Departments, respectively, and a Budget Analyst in the PSO&M Department. As part of the organizational changes, financial data will no longer be consolidated for the PSO&M and PSS Departments, however, will be accounted for and reported upon separately for the PSO&M, PSS, System Planning, Environmental, and Power Supply Engineering Departments. This will be chiefly accomplished by the new Financial Administration group in the PSO&M Department. This group will also be responsible for SOX compliance across the PS process area, and for compliance with Management Accounting policies and guidelines including quarterly and year-end closings and accruals.

The new Financial Administration group in the PSO&M Department will be comprised of the following three positions: Lead Financial Administrator, Administrator, and Budget Analyst. The Lead Financial Administrator position is being filled by the internal transfer of the current Administrator of the PSS Department. The Lead Financial Administrator will have overall responsibility for the performance of the group and will be specifically responsible for financial administration of O&M expenses for the PSS and System Planning Departments. The Administrator position in the Financial Administration group in the PSO&M Department is new. Recruitment is in progress to fill this position and it is expected to be filled approximately July 1, 2007. The Administrator would have specific responsibility for financial administration of O&M expenses for the PSO&M and PS Environmental Departments. The Budget Analyst position is unchanged. The Budget Analyst’s principal responsibilities include tracking and analysis of maintenance expenses for the PSO&M Department. The Administrator in the PS Engineering Department is also not changed, however, duties previously performed by this

Administrator for the Environmental Department are being transferred to the new Administrator in the new Financial Administration group in the PSO&M Department. The Administrator in the PS Engineering Department will concentrate his/her duties on the administration and analysis of capital and O&M expenses incurred by the PS Engineering Department.

The only adjustment to the 2007 test year estimate for Other Production Labor Expense attributable to this portion of the reorganization of the Power Supply Process Area is \$38,000 for the new Administrator in the PSO&M Department. (See Attachment 7 to this update.)

#### FUEL INFRASTRUCTURE EXPENSE UPDATE

The expense adjustment for Fuel Infrastructure is an increase of \$39,000 in Production O&M Maintenance Labor, as shown in Attachment 1, page 1 and page 8.

With the Company initiative to procure biofuels for the proposed Campbell Industrial Park Generating Unit and other generating units on the MECO and HELCO systems, the Power Supply Process Area reorganization creates the focused team necessary to: manage existing and new fuel infrastructure and system; assure regulatory compliance for the operation and maintenance of fuel pipeline; develop and manage new fuel supply relationships, and provide direction for the increased operational complexity associated with the requirements of new fuel(s).

In the reorganization of the Power Supply Process Area, the Power Supply Services Department retained the Fuels Resources and Power Purchase Divisions. The reorganization also resulted in the creation of a new Fuels Infrastructure Division within the Power Supply Services Department. The new organizational structure of the Power Supply Services Department is also depicted in Attachment 1 to the response to CA-IR-68. That depiction included three divisions

each headed by a director: (1) Power Purchase; (2) Fuels Resources, and (3) Fuels Infrastructure, plus an Administrator. As described earlier, however, the Administrator position has been transferred to the consolidated Financial Administration group in the PSO&M Department.

The position of Manager in the Power Supply Services Department was filled by the internal transfer of the then Manager of Operations Strategic Planning (who at the time was a direct report to the Senior Vice President of Operations).

The new Fuels Infrastructure Division was created to lead the HECO initiative to procure biofuels for the proposed Campbell Industrial Park Generating Unit and other generating units on the MECO and HELCO systems, and to facilitate fuel asset management and ensure compliance with the policies, requirements, and regulations regarding the various fuel delivery and storage infrastructure used by HECO, MECO, and HELCO. The new Fuels Infrastructure Division will consist of a Fuels Infrastructure Director and two staff engineers. One staff engineer position was transferred from the Power Supply Engineering Department and one position was reassigned from the Fuels Resources Division. The Fuels Infrastructure Director position is new, for a net gain of one new position in the Power Supply Process Area within the Power Supply Services Department. The new Fuels Infrastructure Director position was filled, effective May 28, 2007. The staff engineering position hiring process has begun and should be complete by the end of August 2007. Power Supply Operations and Maintenance non-labor expenses for this work was included in the 2007 test year estimate and is not expected to change as a result of this reorganization. The adjustment to the 2007 test year estimate for Other Production Labor

Expense attributable to the new Fuel Infrastructure Director is estimated to be \$39,000, which is net of estimated billings to MECO and HELCO. (See Attachment 7 to this update.)

#### ENGINEER RETENTION PROGRAM EXPENSE UPDATE

The expense adjustment for the Engineer Retention Program is an increase of \$65,000, of which \$15,000 is in Production Operations Labor and \$50,000 in Production Maintenance Labor. (See Attachment 1, page 1 and page 9.)

The Engineering Retention program was approved after the 2006 Budget was approved and partially funded by the Ho'okina program. This program adjustment resulted in permanent changes to adjusted Engineers' salaries (see Responses to CA-IR-69 and CA-IR-297 and also refer to HECO's June 2007 Update, HECO T-10, Attachment 2, page 1).

#### DISTRIBUTED GENERATOR OUTSIDE SERVICE EXPENSE UPDATE

The expense adjustment for the Distributed Generator Outside Service expense is a decrease of \$185,000 in Production Operations Labor, as shown in Attachment 1, page 1 and page 10. As described in HECO's responses to CA-IR-237 and CA-IR-337, the actual expense in the Outside Service/Other cost category is significantly below the 2007 test year expense projection of \$245,000. The actual 2007 expenses for refueling contract services, as of the end of May 2007, total \$26,000. The annualized amount for refueling contract services in 2007 is now expected to be \$60,000. The difference of \$185,000 (\$245,000 minus \$60,000) makes up the downward adjustment in Distributed Generator Outside Service expense.

OPERATOR OVERTIME EXPENSE UPDATE

The expense adjustment for Operator Overtime expense is a decrease of \$325,000 in Production Operations Labor expense, as shown in Attachment 1, page 1 and page 11. The calculation of the decrease is described in detail in HECO's response to CA-IR-232.

SUMMARY

As indicated in Attachment 1, page 1, the net effect of these adjustments is an increase in the 2007 test year estimate for Production Operations and Maintenance expense of \$703,000.



HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

	BUDGET	BUD ADJ	NORM	DIRECT	Emis Fee ADJUST	DG-DSG ADJUST	Hookina ADJUST	Env 316(b) ADJUST	Gen Bid ADJUST	Admin Pos ADJUST	Fuel Infra ADJUST	EngRelProg ADJUST	DG-O/S ADJUST	Oper OT ADJUST	TOTAL ADJUST	UPDATE
<b>D. Giovanni</b>																
<b>PRODUCTION O &amp; M EXPENSE</b>																
PRODUCTION OPER																
LABOR	14,242			14,242	0	0	0	0	66	38	0	15	0	0	(206)	14,036
NON-LABOR	15,483	(392)	(221)	14,870	(147)	(55)	(42)	1,006	243	0	0	0	(185)	0	820	15,690
TOTAL	29,725	(392)	(221)	29,112	(147)	(55)	(42)	1,006	309	38	0	15	(185)	(325)	614	29,726
PRODUCTION MAINT																
LABOR	15,219			15,219	0	0	0	0	0	0	39	50	0	0	89	15,308
NON-LABOR	24,489		(598)	23,891	0	0	0	0	0	0	0	0	0	0	0	23,891
TOTAL	39,708	0	(598)	39,110	0	0	0	0	0	0	39	50	0	0	89	39,199
PRODUCTION - TOTAL																
LABOR	29,461	0	0	29,461	0	0	0	0	66	38	39	65	0	0	(117)	29,344
NON-LABOR	39,972	(392)	(819)	38,761	(147)	(55)	(42)	1,006	243	0	0	0	(185)	0	820	39,581
TOTAL	69,433	(392)	(819)	68,222	(147)	(55)	(42)	1,006	309	38	39	65	(185)	(325)	703	68,925

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Emission Fees

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR

NON-LABOR (147)

TOTAL (147)

PRODUCTION MAINT

LABOR

NON-LABOR

TOTAL

PRODUCTION - TOTAL

LABOR

NON-LABOR (147)

TOTAL (147)

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Distributed Generation - Customer  
Dispatchable Standby Generator (DSG)

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR

NON-LABOR (55)

TOTAL (55)

PRODUCTION MAINT

LABOR

NON-LABOR

TOTAL

PRODUCTION - TOTAL

LABOR

NON-LABOR (55)

TOTAL (55)

NOTE: See DSG cost in CA-IR-337

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Ho'okina Award

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR

NON-LABOR

(42)

TOTAL

(42)

PRODUCTION MAINT

LABOR

NON-LABOR

TOTAL

PRODUCTION - TOTAL

LABOR

NON-LABOR

(42)

TOTAL

(42)

NOTE: See HECO-1220, HECO-WP-101(G), page 887.

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Environmental 316(b)

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR

NON-LABOR

1,006

TOTAL

1,006

PRODUCTION MAINT

LABOR

NON-LABOR

TOTAL

PRODUCTION - TOTAL

LABOR

NON-LABOR

1,006

TOTAL

1,006

NOTE: See HECO-1220

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Generation Bidding Division

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR	66
NON-LABOR	243

TOTAL	<u>309</u>
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PRODUCTION MAINT

LABOR	
NON-LABOR	

TOTAL	<u>          </u>
-------	-------------------

PRODUCTION - TOTAL

LABOR	66
NON-LABOR	243

TOTAL	<u>309</u>
-------	------------

NOTE: Reclass G/L code adjustments reported as A&G costs.

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Administrator Position

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR 38

NON-LABOR

TOTAL 38

PRODUCTION MAINT

LABOR

NON-LABOR

TOTAL

PRODUCTION - TOTAL

LABOR 38

NON-LABOR

TOTAL 38

NOTE: Administrator's Labor Cost is processed as clearing cost. Therefore, most of the cost is recorded in A&G.

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Fuels Infrastructure Division

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER  
LABOR  
NON-LABOR

TOTAL

PRODUCTION MAINT  
LABOR  
NON-LABOR

TOTAL

PRODUCTION - TOTAL  
LABOR  
NON-LABOR

TOTAL

39

39

39

39



HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Engineering Retention Program

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR	15
NON-LABOR	

TOTAL	<u>15</u>
-------	-----------

PRODUCTION MAINT

LABOR	50
NON-LABOR	

TOTAL	<u>50</u>
-------	-----------

PRODUCTION - TOTAL

LABOR	65
NON-LABOR	

TOTAL	<u>65</u>
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NOTE: See HECO T-10 June 2007 Update, page 1 and Attachment 1, page 5.

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Distributed Generation - Outside  
Services Adjustment

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR

NON-LABOR (185)

TOTAL (185)

PRODUCTION MAINT

LABOR

NON-LABOR

TOTAL

PRODUCTION - TOTAL

LABOR

NON-LABOR (185)

TOTAL (185)

NOTE: See CA-IR-337 for explanation

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE (\$1000S)

Operation - OT Adjustment

ADJUST

D. Giovanni

**PRODUCTION O & M EXPENSE**

PRODUCTION OPER

LABOR (325)

NON-LABOR

TOTAL (325)

PRODUCTION MAINT

LABOR

NON-LABOR

TOTAL

PRODUCTION - TOTAL

LABOR (325)

NON-LABOR

TOTAL (325)

NOTE: See CA-IR-232, Attachment 1, for detailed calculations.

Hawaiian Electric Company, Inc.  
2007 RATE CASE

OTHER PRODUCTION O&M EXPENSE ADJUSTMENT  
EMISSIONS FEE  
(\$ Thousands)

	(A)	(B)	(C)
	<u>Operations Non-Labor</u>	<u>Maintenance Non-labor</u>	<u>Total</u>
<u>Change in Emissions Fee Budget Amount</u>			
Emissions Fees- at Direct (1)	1,090	0	1,090
Updated Emissions Fees (2)	898	0	898
Total Budget Adjustment	-192	0	-192
<u>2007 Test Year Expense</u>			
TY Emissions Fees - at Direct (3)	838	0	838
Updated TY Emissions Fees (4)	691	0	691
Total TY Emissions Fee Reduction	-147	0	-147
<u>Change in Emissions Fee Normalization Amount</u>			
Normalization at Direct (5)	-252	0	-252
Updated TY Normalization (6)	-207	0	-207
Total Normalization Adjustment	45	0	45
Total Emissions Fee Adjustment (7)	-147	0	-147

Notes:

- (1) Per HECO T-6, pages 58-59 and HECO-625.
- (2) Per CA-IR-2, Attachment 7, page 3, revised Emission Fee = \$898.
- (3) TY Emissions Fee - at Direct = \$1,090 X (10/13) = \$838.
- (4) Updated TY Emissions Fee = \$898 X (10/13) = \$691.
- (5) Normalization at Direct = (\$1090 - ((10/13) X \$1,090) = \$252).
- (6) Updated Normalization = (\$898 - ((10/13) X \$898) = \$207)
- (7) Total Emissions Fee Adjustment = Sum of Total Budget Adj and Total Normalization Adj.

HAWAIIAN ELECTRIC COMPANY INC.

2007 RATE CASE

Costs Incurred for 316(b) Work for the period 2005-Apr. 2007

		Honolulu HP002066	Waiau HP002067	Kahe HP002068	Totals
2005					
	150	\$2,992	\$3,467	\$4,075	\$10,534
	155	\$373	\$423	\$523	\$1,319
Overheads		\$2,038	\$2,471	\$3,034	\$7,544
	501	\$56,850	\$56,782	\$57,335	\$170,966
		<u>\$62,252</u>	<u>\$63,143</u>	<u>\$64,967</u>	<u>\$190,362</u>
2006					
	150	\$4,039	\$11,412	\$4,595	\$20,046
	155	\$355	\$1,037	\$401	\$1,793
Overheads		\$2,522	\$8,711	\$2,889	\$14,122
	201	\$0	\$8,367	\$0	\$8,367
	205	\$0	\$118	\$0	\$118
	501	\$98,733	\$112,240	\$101,724	\$312,697
	520	\$801	\$801	\$801	\$2,404
	521	\$72	\$72	\$72	\$216
		<u>\$106,521</u>	<u>\$142,759</u>	<u>\$110,483</u>	<u>\$359,763</u>
Jan. - Apr. 2007					
	150	\$1,674	\$1,701	\$1,822	\$5,197
	155	\$49	\$53	\$56	\$158
Overheads		\$1,032	\$1,050	\$1,126	\$3,209
	501	\$97,095	\$104,574	\$100,037	\$301,707
	520	\$320	\$320	\$320	\$961
	521	\$14	\$14	\$14	\$41
		<u>\$100,184</u>	<u>\$107,712</u>	<u>\$103,376</u>	<u>\$311,271</u>
Totals					
	150	\$8,704	\$16,581	\$10,492	\$35,777
	155	\$776	\$1,512	\$981	\$3,269
Overheads		\$5,592	\$12,232	\$7,050	\$24,874
	201	\$0	\$8,367	\$0	\$8,367
	205	\$0	\$118	\$0	\$118
	501	\$252,677	\$273,596	\$259,096	\$785,370
	520	\$1,122	\$1,122	\$1,122	\$3,365
	521	\$85	\$85	\$85	\$256
		<u>\$268,957</u>	<u>\$313,614</u>	<u>\$278,826</u>	<u>\$861,396</u>

Note: Totals may not add exactly due to rounding.

HAWAIIAN ELECTRIC COMPANY INC.

2007 HECO Rate Case

316(b) Work - Portion of the total PEWON cost representing cost incurred in 2007

	Honolulu HP002066	Waiau HP002067	Kahe HP002068	Totals
150	\$1,673.52	\$1,701.36	\$1,822.01	\$5,196.89
155	\$48.77	\$52.53	\$56.26	\$157.56
Overheads	\$1,032.41	\$1,049.80	\$1,126.33	\$3,208.54
501	\$97,094.98	\$104,574.37	\$100,037.20	\$301,706.55
520	\$320.35	\$320.36	\$320.35	\$961.06
521	\$13.54	\$13.53	\$13.53	\$40.60
	<u>\$100,183.57</u>	<u>\$107,711.95</u>	<u>\$103,375.68</u>	<u>\$311,271.20</u>
Lab & On-cost	\$2,754.70	\$2,803.69	\$3,004.60	\$8,562.99
				3%

HAWAIIAN ELECTRIC COMPANY INC.

2007 RATE CASE

CWA §316(b) - Outside Services Expense Projection for May 2007- Dec. 2007

Activity	Cost	Comment
316(b) monitoring - Kahe, Waiau, Honolulu	\$130,000	Estimate to complete first year monitoring and data processing; based on Tenera 04/04/07 estimate.
Extended monitoring - Kahe, Waiau, Honolulu	\$388,575	Extended monitoring estimate for May-Dec 2007: Tenera 04/04/07 proposal prorated for 8 months = \$582,862 X (8/12) = \$388,575. Note: Estimate is based on current monitoring frequency of weekly impingment monitoring and biweekly entrainment monitoring.
Closed Cycle Cooling Evaluation	\$6,000	EPRI Solutions
Best Professional Judgment Evaluation	\$213,500	EPRI Solutions (includes 1st year data evaluation, BPJ eval, fish protection technologies and operational measures review, DOH meeting); Work to be completed by Dec-07.
Total	\$738,075	Total for Apr-07 to Dec-07

HAWAIIAN ELECTRIC COMPANY INC.  
2007 RATE CASE  
Environmental 316(b) Cost  
(In Thous)

	2007	2008	2009	Total	Normalized Over 3 Yrs
<u>2007</u>					
316(b) incurred 1/07-4/07	\$311			\$311	\$104
Monitoring- Tenera Est	\$130			\$130	\$43
Extended Monitoring- Tenera	\$389			\$389	\$130
Closed Cycle Cool Eval- EPRI	\$6			\$6	\$2
Best Prof Judge Eval- EPRI	\$214			\$214	\$71
<u>2008</u>					
Continue IM&E Eval*		\$583		\$583	\$194
Analyze/Eval 2nd Yr data		\$70		\$70	\$23
Comments to EPA		\$15		\$15	\$5
<u>2009</u>					
Continue IM&E Eval*			\$583	\$583	\$194
Analyze/Eval 2nd Yr data*			\$70	\$70	\$23
Research Fish Prot Tech			\$60	\$60	\$20
Pilot Tests Select Tech			\$500	\$500	\$167
Research Life History Fish and Invert			\$70	\$70	\$23
Comments to EPA on proposed rule			\$20	\$20	\$7
TOTAL	\$1,050	\$668	\$1,303	\$3,021	\$1,006



HAWAIIAN ELECTRIC COMPANY, INC.  
2007 RATE CASE  
Added Positions - Calc Labor and Non-Labor Cost

	<u>Ct</u>	<u>Labor Class</u>	<u>Std Rt (1)</u>	<u>FTE</u>	<u>Dir Cost</u>	<u>HELCO Billable</u>	<u>MECO Billable</u>	<u>NET HECO</u>
Generation Bidding-								
Labor-								
Director	1	FS-I	46.79	2088	\$97,698	\$9,770	\$39,079	\$48,849
Staff Engineers	2	Y_GENPLN	39.87	2088	\$166,497	\$16,650	\$66,599	\$83,248
Annualized	3				\$264,195	\$26,420	\$105,678	\$132,097
1/2 Year					\$132,098	\$13,210	\$52,839	\$66,049
Non-Labor- (Normalized)					\$840,500	\$8,333	\$413,834	\$418,333
LESS: Non-Labor 2007 Budget (2)					(\$175,000)	\$0	\$0	(\$175,000)
					\$665,500	\$8,333	\$413,834	\$243,333
Total Generation Bidding-					\$797,598	\$21,543	\$466,673	\$309,382
Fuel Infrastructure-								
Director	1	FS-I	46.79	2088	\$97,698	\$9,770	\$9,770	\$78,158
1/2 Year					\$48,849	\$4,885	\$4,885	\$39,079
PSOM Administrator	1	TC-I	36.00	2088	\$75,168	\$0	\$0	\$75,168
1/2 Year					\$37,584	\$0	\$0	\$37,584
	5				\$884,031	\$26,428	\$471,558	\$386,045

Notes:

- (1) Standard labor rates are per the standard rates applied in Rate Case Test Year 2007.  
Used Generation Planning labor class for Staff; currently there are none for Generation Bidding.
- (2) Refer to CA-IR-2, HECO T-6, Attachment 12B, page 2.

HAWAIIAN ELECTRIC COMPANY INC.

2007 RATE CASE

Generation Bidding Division

Non-Labor Cost - TY 2007 RATE CASE (Normalized Full Year)

Normalized FY07-FY09 over  
THREE years.

	FY07 Update	FY08 Forecast	FY09 Forecast	TY 2007 RATE CASE	
				Total	Normalized
CONSOLIDATED:					
Outside Consultant - code of conduct (start up 1/3 share)	\$45,000	\$0	\$0	\$45,000	\$15,000
Outside Legal (start up 1/3 share)	\$30,000	\$0	\$0	\$30,000	\$10,000
Outside Consultant - RFP for HECO	\$150,000	\$150,000	\$150,000	\$450,000	\$150,000
Outside Consultant - RFP for HELCO	\$0	\$0	\$0	\$0	\$0
Outside Consultant - RFP for MECO	\$150,000	\$150,000	\$150,000	\$450,000	\$150,000
Outside Legal - RFP for HECO	\$60,000	\$150,000	\$150,000	\$360,000	\$120,000
Outside Legal - RFP for HELCO	\$0	\$0	\$0	\$0	\$0
Outside Legal - RFP for MECO	\$50,000	\$150,000	\$150,000	\$350,000	\$116,667
Independent Observer - RFP for HECO	\$60,000	\$180,000	\$180,000	\$420,000	\$140,000
Independent Observer - RFP for HELCO	\$0	\$0	\$0	\$0	\$0
Independent Observer - RFP for MECO	\$50,000	\$180,000	\$180,000	\$410,000	\$136,667
Interisland Travel - HELCO & MECO	\$900	\$1,800	\$1,800	\$4,500	\$1,500
Meals/Entertainment - HELCO & MECO	\$400	\$800	\$800	\$2,000	\$667
	<u>\$596,300</u>	<u>\$962,600</u>	<u>\$962,600</u>	<u>\$2,521,500</u>	<u>\$840,501</u>
HECO:					
Outside Consultant - code of conduct (start up 1/3 share)- Framework Requirements	\$15,000			\$15,000	\$5,000
Outside Legal (start up 1/3 share)- Framework Requirements	\$10,000			\$10,000	\$3,333
Outside Consultant - RFP for HECO	\$150,000	\$150,000	\$150,000	\$450,000	\$150,000
Outside Legal - RFP for HECO	\$60,000	\$150,000	\$150,000	\$360,000	\$120,000
Independent Observer - RFP for HECO	\$60,000	\$180,000	\$180,000	\$420,000	\$140,000
	<u>\$295,000</u>	<u>\$480,000</u>	<u>\$480,000</u>	<u>\$1,255,000</u>	<u>\$418,333</u>
HELCO:					
Outside Consultant - code of conduct (start up 1/3 share)	\$15,000			\$15,000	\$5,000
Outside Legal (start up 1/3 share)	\$10,000			\$10,000	\$3,333
Outside Consultant - RFP for HELCO	\$0			\$0	\$0
Outside Legal - RFP for HELCO	\$0			\$0	\$0
Independent Observer - RFP for HELCO	\$0			\$0	\$0
Interisland Travel	\$0			\$0	\$0
Meals/Entertainment	\$0			\$0	\$0
	<u>\$25,000</u>	<u>\$0</u>	<u>\$0</u>	<u>\$25,000</u>	<u>\$8,333</u>
MECO:					
Outside Consultant - code of conduct (start up 1/3 share)	\$15,000			\$15,000	\$5,000
Outside Legal (start up 1/3 share)	\$10,000			\$10,000	\$3,333
Outside Consultant - RFP for MECO	\$150,000	\$150,000	\$150,000	\$450,000	\$150,000
Outside Legal - RFP for MECO	\$50,000	\$150,000	\$150,000	\$350,000	\$116,667
Independent Observer - RFP for MECO	\$50,000	\$180,000	\$180,000	\$410,000	\$136,667
Interisland Travel - \$175 airfare + \$50 car rental per trip	\$900	\$1,800	\$1,800	\$4,500	\$1,500
Meals/Entertainment - \$100 lunch & dinner per person	\$400	\$800	\$800	\$2,000	\$667
	<u>\$276,300</u>	<u>\$482,600</u>	<u>\$482,600</u>	<u>\$1,241,500</u>	<u>\$413,834</u>
				<u>\$2,521,500</u>	<u>\$840,500</u>

JUNE 2007 UPDATE

**Ref: R. Young, HECO T-7, Transmission and Distribution O&M Expenses:**

**HECO Response:**

For HECO T-7 an adjustment to increase the 2007 Test Year Transmission and Distribution (“T&D”) expense by \$112,887 is being made. This adjustment is the net of:

• Engineering Retention Program labor expenses	\$49,800
• Removal of the VP – Special Projects labor expenses	(\$107,162)
• Removal of Ho’okina award non-labor expenses	(\$60,000)
• Increase to OMS Training Material Development	\$40,773
• Reduction in the OMS amortization non-labor expense	(\$99,352)
• Removal of duplicate OMS Software Maintenance expenses	(\$77,139)
• Increase to OMS Software Maintenance fees	\$55,933
• Increase to OMS Data Conversion Costs	\$262,934
• Addition of Ocean Point AMI lease expense	<u>\$47,100</u>
Net Adjustment	<u>\$112,887</u>

**TRANSMISSION AND DISTRIBUTION  
OPERATION AND MAINTENANCE EXPENSE UPDATE**

**Engineering Retention Program Labor Expense**

The Engineering Retention program was approved after the 2007 budget was completed and is partially funded by dollars that were originally budgeted for but will not be used for the Ho’okina program. This program adjustment resulted in permanent changes to the engineers’

salaries (see Responses to CA-IR-69 and CA-IR-297). The resulting additions to T&D operation and maintenance (“O&M”) expenses are:

Transmission Operation	\$ 8,400
Transmission Maintenance	\$ 1,200
Distribution Operation	\$35,200
Distribution Maintenance	<u>\$ 5,000</u>
Total	<u>\$49,800</u>

The derivation for these adjustments is explained in the HECO T-10 June 2007 Update, pages 1-2 and Attachment 2, page 1.

Removal of the Vice President – Special Project Labor Expenses

Labor expenses were decreased by \$107,162 to reflect the retirement of the Vice President-Special Projects. The derivation for this adjustment is provided in the HECO T-10 June 2007 Update, Attachment 1, page 5, that is being submitted under Amended Protective Order No. 23378, dated June 4, 2007.

Accounts 560 and 561	<u>(\$107,162)</u>
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Removal of Ho’okina Award Non-Labor Expenses

The Ho’okina volunteer award recognition program has been suspended as a result of implementing a targeted compensation program as explained above and in HECO’s response to CA-IR-69. The resulting reductions to the 2007 test year T&D operation non-labor expenses are:

Account 566	(\$16,000)
Account 588	<u>(\$44,000)</u>
Total	<u>(\$60,000)</u>

The amounts included in Accounts 566 and 588 are shown on HECO-WP-101(G), pages 909 and 924. See also HECO-1220.

Increase to OMS Training Material Development

The 2007 test year estimate included forecasted consulting services for training in the amount of \$31,992. (See HECO-WP-101(G), page 922.) HECO filed a letter to the Commission on June 21, 2007, in Docket No. 04-0131, providing information on the current status of the Outage Management System (OMS) Project, and updating the current project cost estimate. Based on the current project cost estimate, consulting services for training will be \$72,765, resulting in a net increase of \$40,773 in distribution operation non-labor expenses for the 2007 test year. This increase is primarily due to an increase in the amount of training to provide a seamless transition from HECO's current outage management process based on paper maps and trouble tickets to a more technologically advanced and sophisticated new OMS. In addition, as explained below, the number of HECO Responsibility Areas, and therefore, the number of employees, to receive OMS training has increased.

Account 588	<u>\$40,773</u>
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OMS HECO Training – Labor Expense

Besides the increase in Consultant Service costs for training, it was determined that training labor expenses for responsibility areas PBZ, PCH, and PRD were not included in the 2007 budget. The omission of these training labor expenses was discovered while preparing responses to CA-IR-108 and CA-IR-110 and it was determined that the project budget discussed in HECO T-7 at pages 27-28 and the expenses shown in HECO-737 did not include these training expenses for these three Responsibility Areas. The training estimates included in the test year and the current estimates for training not included in the test year are shown below.

Training Expenses – In The 2007 Test Year Estimate (Account 588 – Distribution Operation)

As shown on HECO-WP-101(F), pages 809 and 810:

PDF	\$47,448
PRE	<u>\$10,186</u>
Total	<u>\$57,634</u>

Training Expenses - OMS Project Current Estimates (Account 588 – Distribution Operation)

PBZ	\$19,926
PCH	\$ 9,680
PDF	\$48,944
PRD	\$47,581
PRE	<u>\$ 4,273</u>
Total	<u>\$130,404</u>

Despite these higher current expense estimates, HECO is not proposing any adjustments for the labor training expenses not included in the test year estimate.

Reduction in the OMS Amortization Non-Labor Expenses

HECO filed a letter with the Commission on June 21, 2007, providing information on the current status of the OMS Project, Docket No. 04-0131 and updating the current project cost estimate. In addition, HECO's response to CA-IR-108 further explained the impact of these changes on the 2007 test year estimates. The 2007 test year estimates included \$257,814 for the amortization of the OMS software development costs (see HECO-WP-101(G), page 918). The updated estimate is \$158,462. The estimate has been reduced due to delays in the implementation of the OMS project as discussed in the response to CA-IR-108 and HECO's June 21, 2007 letter to the Commission. The reduction in the amortization expense (budgeted as distribution operation non-labor expense) is:

Account 588	<u>(\$ 99,352)</u>
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The resulting unamortized balance at year end 2007 will be \$4,642,308. (See also HECO T-10 June 2007 Update, page 5 and Attachment 5.)

Removal of duplicate OMS Software Maintenance Non-Labor Expense

During the preparation of HECO's response to CA-IR-108, it was determined that the OMS software maintenance expense (EE:501, Outside Services, General) was inadvertently budgeted in both responsibility area PRD (Operating Dispatch) in the amount of \$77,139 and in responsibility area PRE (Operating Engineering) in the amount of \$72,620. (See HECO-WP-101(G), pages 925 and 917, respectively.) The following adjustment reduces the distribution operation non-labor expense for the duplicate software maintenance expense from the Dispatch area (Responsibility Area PRD).

Account 581	<u>(\$77,139)</u>
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Increase to OMS Software Maintenance Fees

The recently updated OMS project cost estimate included an update for software maintenance expenses. The current estimate is \$307,232, of which \$137,443 is estimated to be incurred in 2007. Although the software maintenance fees were not initially included in the project estimates when the capital improvement application for this project was filed, an estimate was included in the 2007 test year estimate for the System Operation and the Information Technology and Services departments. The amount budgeted was \$72,620 for SPL software maintenance in System Operation (RA:PRE) and \$8,890 for Oracle software maintenance in Information Technology and Services (RA: PEI). (See HECO-WP-101(G), pages 917 and 924.) The net increase to distribution operation non-labor expense over what was included in the test year estimate is:

Account 588	<u>\$55,933</u>
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Increase to OMS Data Conversion Costs

The current project cost estimate indicates higher than forecasted data conversion costs. The recent change in the estimate for this task is attributed to the change in the Geospatial Information System, which caused changes to the OMS extractor and required additional clean-up tasks. The revised estimate of data conversion expense to be incurred in 2007 is \$292,934, as reflected in HECO's June 21, 2007 letter to the Commission. The test year estimate currently includes \$30,000 of data clean-up expense. (See HECO-WP-101(G), page 922.) The net increase to distribution operation non-labor expenses is:

Account 588	<u>\$262,934</u>
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Ocean Pointe AMI Lease Non-Labor Expense

As explained in HECO's response to CA-IR-182, as revised on June 12, 2007, because of the success of the ongoing R&D pilot project, HECO executed an expanded pilot project agreement with Sensus, dated January 9, 2007, to deploy AMI over an expanded coverage area, to include the Ocean Pointe subdivision with the deployment of a third communications tower. The adjustment is made to provide for the cost of leasing the Manu Kapu tower antenna site to provide the coverage area in which to communicate with the AMI meters. The lease expense amount incurred in 2007 is \$47,100. The cost of leasing the Manu Kapu tower antenna was not included in HECO's 2007 budget and, therefore, the following adjustment to increase distribution operation non-labor expense is being made:

Account 588	<u>\$47,100</u>
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Summary

As indicated the net effect of these adjustments is an increase in the 2007 test year estimate for T&D O&M expenses of \$112,887.



Hawaiian Electric Company, Inc.  
JUNE 2007 UPDATE  
TRANSMISSION AND DISTRIBUTION  
OPERATIONS & MAINTENANCE EXPENSE  
(\$000s)

	(A)	(B)	(C)	(D)	(E)	(F=D+E)
	2007 OPERATING BUDGET	BUDGET ADJUST	NORM	DIRECT TESTIMONY 2007 TEST YEAR	Jun-07 BUDGET ADJUST	Jun-07 UPDATED 2007 TEST YEAR
Transmission Operations						
Labor	\$ 2,535		\$ -	\$ 2,535	\$ (98)	\$ 2,437
Non-Labor	\$ 2,880	\$ (37)	\$ -	\$ 2,843	\$ (16)	\$ 2,827
SUB-TOTAL	\$ 5,415	\$ (37)	\$ -	\$ 5,378	\$ (114)	\$ 5,264
Transmission Maintenance						
Labor	\$ 1,934		\$ -	\$ 1,934	\$ 1	\$ 1,935
Non-Labor	\$ 3,158	\$ 21	\$ -	\$ 3,179	\$ -	\$ 3,179
SUB-TOTAL	\$ 5,092	\$ 21	\$ -	\$ 5,113	\$ 1	\$ 5,114
TOTAL TRANSMISSION	\$ 10,507	\$ (16)	\$ -	\$ 10,491	\$ (113)	\$ 10,378
Distribution Operations						
Labor	\$ 5,325	\$ (68)	\$ -	\$ 5,257	\$ 35	\$ 5,292
Non-Labor	\$ 5,394	\$ 10	\$ -	\$ 5,404	\$ 186	\$ 5,590
SUB-TOTAL	\$ 10,719	\$ (58)	\$ -	\$ 10,661	\$ 221	\$ 10,882
Distribution Maintenance						
Labor	\$ 5,427		\$ -	\$ 5,427	\$ 5	\$ 5,432
Non-Labor	\$ 8,622	\$ 12	\$ -	\$ 8,634	\$ -	\$ 8,634
SUB-TOTAL	\$ 14,049	\$ 12	\$ -	\$ 14,061	\$ 5	\$ 14,066
TOTAL DISTRIBUTION	\$ 24,768	\$ (46)	\$ -	\$ 24,722	\$ 226	\$ 24,948
TOTAL LABOR	\$ 15,221	\$ (68)		\$ 15,153	\$ (57)	\$ 15,096
TOTAL NON-LABOR	\$ 20,054	\$ 6		\$ 20,060	\$ 170	\$ 20,230
GRAND TOTAL	\$ 35,275	\$ (62)	\$ -	\$ 35,213	\$ 113	\$ 35,326

SOURCE:

Columns A to D: See HECO-709.

Column E: See June 2007 Update, Attachment 2.

HAWAIIAN ELECTRIC COMPANY, INC.  
SUMMARY OF ADJUSTMENTS

JUNE 2007 UPDATE  
DOCKET NO. 2006-0386  
HECO T-7  
ATTACHMENT 2  
PAGE 1 OF 1

		June 2007		
		<u>Direct</u>	<u>Update</u>	<u>Adjustment</u>
<u>Transmission Operation</u>				
Labor	Engineering Retention Program	\$ -	\$ 8,400	8,400
	Retirement of VP-Special Projects	\$ 107,162	\$ -	(107,162)
		<u>\$ 107,162</u>	<u>\$ 8,400</u>	<u>\$ (98,762)</u>
Non-Labor Removal of Ho'okina award		\$ 16,000	\$ -	(16,000)
		<u>\$ 16,000</u>	<u>\$ -</u>	<u>\$ (16,000)</u>
<u>Transmission Maintenance</u>				
Labor	Engineering Retention Program	\$ -	\$ 1,200	\$ 1,200
		<u>\$ -</u>	<u>\$ 1,200</u>	<u>\$ 1,200</u>
<u>Distribution Operation</u>				
Labor	Engineering Retention Program	\$ -	\$ 35,200	\$ 35,200
		<u>\$ -</u>	<u>\$ 35,200</u>	<u>\$ 35,200</u>
Non-Labor				
	Removal of Ho'okina award	\$ 44,000	\$ -	\$ (44,000)
	OMS Consultant Services - Trainin	\$ 31,992	\$ 72,765	\$ 40,773
	OMS amortization	\$ 257,814	\$ 158,462	\$ (99,352)
	OMS Software maint dup entry	\$ 77,139	\$ -	\$ (77,139)
	Oceanpoint AMI lease	\$ -	\$ 47,100	\$ 47,100
	OMS additional SW maint fees	\$ 81,510	\$ 137,443	\$ 55,933
	OMS data cleanup	30,000	292,934	262,934
		<u>\$ 522,455</u>	<u>\$ 708,704</u>	<u>\$ 186,249</u>
<u>Distribution Maint</u>				
Labor	Engineering Retention Program	\$ -	\$ 5,000	\$ 5,000
		<u>\$ -</u>	<u>\$ 5,000</u>	<u>\$ 5,000</u>
				<u>\$ 112,887</u>

JUNE 2007 UPDATE

**Ref: D. Yamamoto, HECO T-8, Customer Deposits, Interest on Customer Deposits, Uncollectible Accounts Expense, Late Payment Charges, and Account 903 Expenses**

Customer Deposits and Interest on Customer Deposits

The Customer Deposits and Interest on Customer Deposits have been updated to reflect the recorded actuals through December 2006. These updates resulted in increases for both the Customer Deposits and Interest on Customer Deposits for the 2007 Test Year. The Customer Deposits estimated balance for the 2007 Test Year increased by \$221,000, from \$6,377,000 to \$6,598,000. The Interest on Customer Deposits estimate for the 2007 Test Year increased by \$2,000 from \$375,000 to \$377,000. HECO-802, HECO-803, HECO-WP-802, and HECO-WP-803 have been updated to reflect the changes in the test year estimates and are presented on pages 3 through 6.

Uncollectible Accounts Expense

The uncollectible factor of 0.1009% has not been changed. The Uncollectible Accounts Expense amount has been revised due to the updated revenue projections for the 2007 Test Year. The development of these updated revenue estimates is discussed in the Test Year Update provided in HECO T-3. The estimates of Uncollectible Accounts Expense increased by:

1. \$3,000, from \$1,358,000 to \$1,361,000, at present rates; and
2. \$2,000, from \$1,411,000 to \$1,413,000, at current effective rates.

Because a new revenue requirement has not been developed based on the Company's submitted test year updates, proposed revenues are not available. Thus, the Uncollectible Accounts Expense for revenues for updated proposed rates which also is based on the uncollectible factor

of 0.1009% has not been estimated and is not available. These changes in the test year estimates are reflected on the updated HECO-805 exhibit, found on page 7.

#### Late Payment Charges

The Late Payment Charge percentage factor of 0.095% of electric sales revenues has not been changed. Late Payment Charges were revised for the updated revenue projections for the 2007 Test Year at present rates and current effective rates. This resulted in an increase of \$2,900 in late payment charges associated with both sales revenues at present rates and sales revenues at current effective rates. Because a new revenue requirement has not been developed based on the Company's submitted test year updates, proposed revenues are not available. Thus, the late payment charge for revenues for updated proposed rates has not been estimated and is not available (see updated exhibit HECO-807, shown on page 8).

#### Account 903 Expenses

Estimated expenses for Customer Records and Collections (Account 903.00) were reduced by \$91,000 due to the increase of \$8,700 for allocated costs associated with the Engineering Retention program offset by the elimination of \$100,000 for consulting costs that were originally included in the test year for the implementation of remote printing and billing (see revised HECO-801 on pages 9 and 10). The Engineering Retention program is discussed in the Company's response to CA-IR-69 and in Ms. Patsy Nanbu's (T-10) Test Year Update and the reduction of the remote printing and billing consultant costs is discussed in the Company's response to CA-IR-272.

**HAWAIIAN ELECTRIC COMPANY, INC.**

CUSTOMER DEPOSITS

(ACCOUNT 235.01)

(\$ THOUSANDS)

Line

1	Recorded Balance 12/31/01	4,183
2	Recorded Net Increase in 2002	300
3	Recorded Balance 12/31/02	4,483
4	Recorded Net Increase in 2003	589
5	Recorded Balance 12/31/03	5,072
6	Recorded Net Decrease in 2004	-6
7	Recorded Balance 12/31/04	5,066
8	Recorded Net Increase in 2005	321
9	Recorded Balance 12/31/05	5,387
10	Recorded Net Increase in 2006	982
11	<b>Recorded Bal. 12/31/06</b>	6,369
12	<b>Estimate Increase 12/31/07</b>	458
13	<b>Estimated Balance 12/31/07</b>	<u>6,827</u>
	<b>Recorded Balance 12/31/06</b>	6,369
	<b>Estimated Balance 12/31/07</b>	<u>6,827</u>
		<u>13,196</u> /2
		6,598

Source: HECO-WP-802 rev 5-29-07 for actual recorded 2006

**HAWAIIAN ELECTRIC COMPANY, INC.**

INTEREST ON CUSTOMER DEPOSITS

(ACCOUNT 431.05)

(\$ THOUSANDS)

Line

1	Recorded Balance 12/31/01	236
2	Recorded Net Increase in 2002	26
3	Recorded Balance 12/31/02	262
4	Recorded Net Increase in 2003	18
5	Recorded Balance 12/31/03	280
6	Recorded Net Increase in 2004	39
7	Recorded Balance 12/31/04	307
8	Recorded Net Increase in 2005	2
7	Recorded Balance 12/31/05	309
8	Recorded Net Increase in 2006	42
9	<b>Recorded Balance 12/31/06</b>	351
10	<b>Estimated Increase in 2007</b>	26
11	<b>Estimated Balance 12/31/07</b>	377

Source: HECO-WP-803 rev. 5-29-07 based on updated actual Sep - Dec 2006 for deposits.

**HAWAIIAN ELECTRIC COMPANY, INC.**  
**CUSTOMER DEPOSITS**  
(Account 235.01)

	----- R E C O R D E D -----					
	2001	2002	2003	2004	2005	2006
JANUARY	3,719,126	4,232,863	4,542,477	5,096,061	5,075,469	5,461,661
FEBRUARY	3,774,112	4,316,470	4,530,123	5,124,279	5,099,965	5,596,777
MARCH	3,843,587	4,339,474	4,564,027	5,164,089	5,094,526	5,741,625
APRIL	3,871,783	4,354,984	4,590,389	5,161,650	5,116,575	5,798,289
MAY	3,906,381	4,321,465	4,616,784	5,139,280	5,148,162	5,828,493
JUNE	3,961,245	4,362,189	4,594,128	5,144,856	5,152,599	5,909,336
JULY	4,004,665	4,395,891	4,575,584	5,090,420	5,139,242	5,950,459
AUGUST	4,102,650	4,402,663	4,693,623	5,125,293	5,143,856	6,009,412
SEPTEMBER	4,136,432	4,420,526	4,812,854	5,124,987	5,179,767	6,077,225
OCTOBER	4,139,808	4,471,469	5,020,781	5,035,822	5,273,681	6,217,532
NOVEMBER	4,148,890	4,528,238	5,065,511	5,030,873	5,359,351	6,294,852
DECEMBER	4,183,110	4,482,910	5,071,972	5,065,653	5,387,270	6,368,722

Average annual % increase (2001 - 2005)  
based on year-end balances 7.197%

ESTIMATED  
YEAR-END  
BALANCE

$$2007 \quad 6,368,722 \times 1.07197 = 6,827,079 \quad (1)$$

(1)	$\frac{2005 \text{ YEAR END BALANCE} - 2001 \text{ YEAR END BALANCE}}{2001 \text{ YEAR END BALANCE}}$	/	4 Years	=	Average Annual % increase
	$\frac{5,387,270 - 4,183,110}{4,183,110}$	=	28.786% / 4 Years	=	7.197% Avg. Annual % Increase

Rev. Upd.: 5/29/07 for Sept - Dec. 2006 actual recorded

**HAWAIIAN ELECTRIC COMPANY, INC.**  
**INTEREST ON CUSTOMER DEPOSITS**  
(Account 431.05)

	----- R E C O R D E D -----					
	2001	2002	2003	2004	2005	2006
JANUARY	18,336	20,916	22,415	25,360	25,328	26,936
FEBRUARY	18,596	21,164	22,712	25,480	25,377	27,308
MARCH	18,871	21,582	22,651	25,621	25,500	27,984
APRIL	19,218	21,697	22,820	25,820	25,473	28,708
MAY	19,359	21,775	22,952	25,808	25,583	28,991
JUNE	19,532	21,607	23,084	25,696	25,741	29,142
JULY	19,806	21,811	22,971	25,724	25,763	29,547
AUGUST	20,023	21,979	22,878	25,452	25,696	29,752
SEPTEMBER	20,513	22,013	23,468	25,626	25,719	30,047
OCTOBER	20,682	22,103	24,064	25,625	25,899	30,386
NOVEMBER	20,699	22,357	25,104	25,179	26,368	31,088
DECEMBER	20,744	22,641	25,328	25,154	26,797	31,474
TOTALS	236,379	261,647	280,446	306,548	309,244	351,365

ESTIMATED  
ACCRUED  
INTEREST

$$2007 \quad 351,365 \times 1.07197 = 376,652$$



HAWAIIAN ELECTRIC COMPANY, INC.

UNCOLLECTIBLE ACCOUNTS EXPENSE

2007

ACCOUNT 904

(\$ THOUSANDS)

<u>Line</u>	<u>Estimated Test Year Revenue</u>
	<u>2007</u>
1	Electric Sales Revenue used for 2007 BUDGET \$1,441,000
2	Times Uncollectible Factor used for 2007 Budget 0.0946%
3	Equals Uncollectible Accounts Expense \$1,363
4	Electric Sales Revenue at Present Rates* (without interim surcharge) \$1,348,635
5	Times Uncollectible Factor 0.1009%
6	Equals Uncollectible Accounts Expense \$1,361
7	Electric Sales Revenue at Current Effective Rates \$1,400,520
8	Times Uncollectible Factor 0.1009%
9	Equals Uncollectible Accounts Expense \$1,413
10	Electric Sales Revenue at Proposed Rates N/A
11	Times Uncollectible Factor 0.1009%
12	Equals Uncollectible Accounts Expense N/A

N/A (Not Available) - Updated estimate dependent on revised proposed revenues resulting from the Company's total Test Year updates.

HAWAIIAN ELECTRIC COMPANY, INC.  
2007 TEST YEAR

NON-SALES ELECTRIC UTILITY CHARGES

	At Present Rates	with interim surcharge At Present Rates	At Proposed Rates
<b>Non-Sales Electric Utility Charges</b>			
Service Establishment Charges	\$791.0	\$791.0	\$1,149.0
Field Collection Charges	\$88.9	\$88.9	\$332.2
Returned Check(Payment) Charges	\$38.5	\$38.5	\$112.9
Late Payment Charges - OCARS	\$5.0	\$5.0	\$5.0
Late Payment Charges	\$1,281.2	\$1,330.5	N/A
<b>Total Other Operating Revenues</b>	<b>\$2,204.6</b>	<b>\$2,253.9</b>	N/A

N/A (Not Available) - Updated estimate dependent on revised proposed revenues resulting from the Company's total Test Year updates.

HAWAIIAN ELECTRIC COMPANY, INC.  
CUSTOMER ACCOUNTS EXPENSE  
2001 - 2007

(\$ THOUSANDS)

	-----RECORDED-----						DIRECT TEST.	JUNE 2007 UPDATE	TY UPDATE
CUSTOMER ACCOUNTS	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2007</u>	<u>2007</u>
901.00 Supervision	329	633	620	856	973	1,156	1,358		1,358
902.00 Meter Reading Expenses	2,196	2,114	2,085	2,413	2,192	2,472	2,693		2,693
903.00 Cust Records & Collection	6,811	6,405	6,335	7,049	7,644	7,106	7,969	-91	7,878
905.00 Misc. Customer Accounts	3	2	0	1	1	0	0		0
<b>Subtotal less Uncollectible Acct.</b>	<b>9,339</b>	<b>9,154</b>	<b>9,040</b>	<b>10,319</b>	<b>10,810</b>	<b>10,734</b>	<b>12,020</b>	<b>-91</b>	<b>11,929</b>
904.00 Uncollectible Accounts	774	737	1,015	413	339	1,582	1,358	3	1,361
Total Customer Account Expense <b>Present Rates</b>	<u>10,113</u>	<u>9,891</u>	<u>10,055</u>	<u>10,732</u>	<u>11,149</u>	<u>12,316</u>	<u>13,378</u>	<u>-88</u>	<u>13,290</u>
904.00 Uncollectible Accounts	774	737	1,015	413	339	1,582	1,411	2	1,413
Total Customer Account Expense <b>Current Effective Rates</b>	<u>10,113</u>	<u>9,891</u>	<u>10,055</u>	<u>10,732</u>	<u>11,149</u>	<u>12,316</u>	<u>13,431</u>	<u>-89</u>	<u>13,342</u>
904.00 Uncollectible Accounts	774	737	1,015	413	339	1,582	1,511	N/A	N/A
Total Customer Account Expense @ <b>Proposed Rates</b>	<u>10,113</u>	<u>9,891</u>	<u>10,055</u>	<u>10,732</u>	<u>11,149</u>	<u>12,316</u>	<u>13,531</u>	<u>N/A</u>	<u>N/A</u>

N/A (Not Available) - Updated estimate dependent on revised proposed revenues resulting from the Company's total Test Year updates.

Source: HECO-WP-101 (B), Reports S1 and S2 for Recorded 2001-2005, recorded 2006 Jean Suh extract & 2007 previous TY now Direct Testimony 2007.

HAWAIIAN ELECTRIC COMPANY, INC.  
CUSTOMER ACCOUNTS EXPENSE  
2001 - 2007

(\$ THOUSANDS)

LINE	CUSTOMER ACCOUNTS	2001	2002	2003	2004	2005	2006	Direct Testimony 2007	June 2007 Update 2007	TY Update 2007
-----RECORDED-----										
	<u>Account 901 - Supervision</u>									
1	Labor	71	56	60	43	80	146	154		154
2	Non-labor	258	577	560	813	893	1,010	1,204		1,204
3	TOTAL	329	633	620	856	973	1,156	1,358	0	1,358
	<u>Account 902 - Meter Reading</u>									
4	Labor	1,778	1,717	1,847	1,963	1,852	2,090	2,237		2,237
5	Non-labor	418	397	238	450	340	382	456		456
6	TOTAL	2,196	2,114	2,085	2,413	2,192	2,472	2,693	0	2,693
	<u>Account 903 - Cust Rec. &amp; Collection</u>									
7	Labor	3,657	3,647	3,724	4,012	4,400	4,105	4,274	9	4,283
8	Non-labor	3,154	2,759	2,611	3,037	3,244	3,001	3,695	-100	3,595
9	TOTAL	6,811	6,406	6,335	7,049	7,644	7,106	7,969	-91	7,878
	<u>Account 905 - Misc Cust Accts.</u>									
10	Labor	3	2	0	1	1	0	0	0	0
11	Non-labor									
12	TOTAL	3	2	0	1	1	0	0	0	0
13	Sub total 901,902,903,905									
13	Labor	5,509	5,422	5,631	6,019	6,333	6,341	6,665	9	6,674
14	Non-Labor	3,830	3,733	3,409	4,300	4,477	4,393	5,355	-100	5,255
15	TOTAL	9,339	9,155	9,040	10,319	10,810	10,734	12,020	-91	11,929
	<u>Account 904 - Uncollectible Accts.</u>									
16	Non-labor	774	736	1,015	413	339	1,582	1,358	3	1,361
17	TOTAL	774	736	1,015	413	339	1,582	1,358	3	1,361
	<u>Total Cust. Accts Present Rates</u>									
18	Labor	5,509	5,422	5,631	6,019	6,333	6,341	6,665	9	6,674
19	Non-labor	4,604	4,469	4,424	4,713	4,816	5,975	6,713	-97	6,616
20	TOTAL	10,113	9,891	10,055	10,732	11,149	12,316	13,378	-88	13,290
	<u>Account 904 - Uncollectible Accts.</u>									
21	Non-labor	774	736	1,015	413	339	1,582	1,411	2	1,413
22	TOTAL	774	736	1,015	413	339	1,582	1,411	2	1,413
	<u>Total Cust. Accts Current Effective Rates</u>									
23	Labor	5,509	5,422	5,631	6,019	6,333	6,341	6,665	9	6,674
24	Non-labor	4,604	4,469	4,424	4,713	4,816	5,975	6,766	-98	6,668
25	TOTAL	10,113	9,891	10,055	10,732	11,149	12,316	13,431	-89	13,342
	<u>Account 904 - Uncollectible Accts.</u>									
26	Non-labor	774	736	1,015	413	339	1,582	1,511	N/A	N/A
27	TOTAL	774	736	1,015	413	339	1,582	1,511	N/A	N/A
	<u>Total Cust. Accts Proposed Rates</u>									
28	Labor	5,509	5,422	5,631	6,019	6,333	6,341	6,665	N/A	N/A
29	Non-labor	4,604	4,469	4,424	4,713	4,816	5,975	6,866	N/A	N/A
30	TOTAL	10,113	9,891	10,055	10,732	11,149	12,316	13,531	N/A	N/A

N/A (Not Available) - Updated estimate dependent on revised proposed revenues resulting from the Company's total Test Year updates.

JUNE 2007 UPDATE

**Ref: Faye Chiogioji, HECO T-14, Updated Test Year Average and Test Year End of Year Employee Counts**

In its response to CA-IR-27 and CA-IR-302, submitted on April 19, 2007 and May 30, 2007 respectively, the Company updated its Test Year Average and Test Year End of Year (“EOY”) employee counts.

The Energy Services Department has been increased by two employees as a result of HECO’s proposal to include DSM-related labor costs for two incremental regular HECO employees in base rates. See HECO’s response to CA-IR-263, 122 and 130. The proposed classification of labor costs associated with these two regular HECO employees as base labor is consistent with the treatment by the Energy Services Department of all other regular HECO employee labor costs as base labor. An Updated HECO-1403 and an Updated HECO-WP-1401 were submitted on April 19, 2007 in response to CA-IR-27, pages 7 and 8, to reflect this update.

Subsequently, the Power Supply Process Area also increased its employee requirements by five employees to reflect the new organization that is described in detail by Mr. Dan Giovanni (T-6) in the Company’s June 2007 test year update. An Updated HECO-1403 and an Updated HECO-WP-1401 were submitted on May 30, 2007 in response to CA-IR-302, pages 7 and 8, to reflect this update.

With the retirement of the Vice President-Special Projects, the Company will eliminate the VP-Special Projects department. Of the two positions that were included in the test year, the VP-Special Projects position and associated labor costs have been eliminated (see Ms. Patsy Nanbu’s (T-10) and Mr. Robert Young’s (T-7) June 2007 test year updates). An Updated WP-1401 and Updated HECO-1403 are submitted on pages 3 and 4 to reflect this change.

Although the secretary who occupied the remaining position in the department has transferred to the Power Supply Services department, her position and associated labor costs are still reflected in the VP-Special Projects department. No additional employee count or labor cost has been added by the Power Supply Services department to its test year estimates.

The Company's updated Test Year Average totals 1,552 as shown on page 3 and the Company's updated Test Year EOY total is 1,560 as shown on page 4.



Hawaiian Electric Company, Inc.  
Updated 2007 Test Year Average Calculation  
Updated HECO-WP-1401  
(\*\*\*\*Reflects June 2007 Update, dated 06/29/07)

JUNE 2007 UPDATE  
DOCKET NO. 2006-0386  
PAGE 3 OF 4

Dept	Jan-07	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Total	Test Year Average
Comp & Ben	15	15	15	15	15	15	15	15	15	15	15	15	15	195	15
Ind Rel	9	9	9	9	9	9	9	9	9	9	9	9	9	117	9
SSF	47	47	47	47	47	47	47	47	47	47	47	47	47	611	47
VP-Corp Exc	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
WFSD	17	17	17	17	17	17	17	17	17	17	17	17	17	221	17
	90	90	90	90	90	90	90	90	90	90	90	90	90	1170	90
Corp Comm	10	10	10	10	10	10	10	10	10	10	10	10	10	130	10
VP-Corp Rel	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
	12	12	12	12	12	12	12	12	12	12	12	12	12	156	12
CustTechAp	10	10	10	10	10	10	10	10	10	10	10	10	10	130	10
Engy Svcs*	26	26	26	26	26	26	26	26	26	26	26	26	26	338	26
Less: DSM	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-9	-117	-9
**Add Back: DSM	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
Fcst&Res*	12	12	12	12	12	12	12	12	12	12	12	12	12	156	12
Less: DSM	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-26	-2
IRP	6	6	6	6	6	6	6	6	6	6	6	6	6	78	6
Mktg Svcs	12	12	12	12	12	12	12	12	12	12	12	12	12	156	12
VP-Cust Sol	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
	57	59	59	59	59	59	59	59	59	59	59	59	59	765	59
C&M	220	220	220	220	220	220	220	220	220	220	220	220	220	2860	220
Engineering	85	85	85	85	85	85	85	85	85	85	85	85	85	1105	85
Supp Svcs	85	85	85	85	85	85	85	85	85	85	85	85	85	1105	85
Sys Op	117	117	117	117	117	117	117	117	117	117	117	117	117	1521	117
VP-En Del	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
	509	509	509	509	509	509	509	509	509	509	509	509	509	6617	509
CID	53	53	53	53	53	53	54	54	54	54	53	53	53	693	53
Engy Proj	9	9	9	9	9	9	9	9	9	9	9	9	9	117	9
SVP-EnSol	4	4	4	4	4	4	4	4	4	4	4	4	4	52	4
Tech	3	3	3	3	3	3	3	3	3	3	3	3	3	39	3
	69	69	69	69	69	69	70	70	70	70	69	69	69	901	69
Financial VP	3	3	3	3	3	3	3	3	3	3	3	3	3	39	3
Gen Acctg	26	26	26	26	26	26	26	26	26	26	26	26	26	338	26
InfoTech	94	94	94	94	94	94	94	94	94	94	94	94	94	1222	94
MAFS	22	22	22	22	22	22	22	22	22	22	22	22	22	286	22
RiskMgt	9	9	9	9	9	9	9	9	9	9	9	9	9	117	9
	154	154	154	154	154	154	154	154	154	154	154	154	154	2002	154
Legal	16	16	16	16	16	16	16	16	16	16	16	16	16	208	16
VPGen	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
	18	18	18	18	18	18	18	18	18	18	18	18	18	234	18
Ed & Cons Aff	8	8	8	8	8	8	8	8	8	8	8	8	8	104	8
Reg Affairs	8	8	8	8	8	8	8	15	15	15	15	15	15	146	11
VP-Gov & Com	7	7	7	7	7	7	7	7	7	7	7	7	7	91	7
	23	23	23	23	23	23	23	30	30	30	30	30	30	341	26
Cust Svc	134	134	134	134	134	134	134	134	134	134	134	134	134	1742	134
Adjustment	-7	-7	-7	-3	-3	-3	-1	-1	-1	-1	-1	-1	-1	-37	-3
SVP-Oper	3	3	3	3	3	3	3	3	3	3	3	3	3	39	3
	130	130	130	134	134	134	136	136	136	136	136	136	136	1744	134
CorpAudComp	12	12	12	12	12	12	12	12	12	12	12	12	12	156	12
President	5	5	5	5	5	5	5	5	5	5	5	5	5	65	5
	17	17	17	17	17	17	17	17	17	17	17	17	17	221	17
Gov Rel	3	3	3	3	3	3	3	3	3	3	3	3	3	39	3
SVP-Pub Aff	2	2	2	2	2	2	2	2	2	3	2	2	2	27	2
	5	5	5	5	5	5	5	5	5	6	5	5	5	66	5
Environ	24	24	24	24	24	24	24	24	24	24	24	24	24	312	24
Production	383	383	383	383	383	383	383	383	383	383	383	383	383	4979	383
***Adjustment							1	2	5	5	5	5	5	33	3
PwrSup Eng	46	46	46	46	46	46	46	46	46	46	46	46	46	598	46
VP-Pwr Sup	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
	455	455	455	455	455	456	457	460	460	460	460	460	460	5948	458
VP-SpecProj	2	2	2	2	2	2	2	2	2	2	2	2	2	26	2
****Adjustment	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-13	-1
	1	1	1	1	1	1	1	1	1	1	1	1	1	13	1
	1540	1542	1542	1546	1546	1547	1551	1561	1561	1562	1560	1560	1560	20178	1552

\*Excludes 11 employees covered under the DSM adjustment surcharge and reflects Customer Service's revised 2007 staffing plan.

\*\*Updated to reflect D&O 23258: Two DSM employees previously removed from employee counts are added back.

\*\*\*Updated to reflect Production's revised staffing plan as stated in the June 2007 Update, HECO T-6.

\*\*\*\*Updated to reflect retirement of VP-Special Projects as stated in June 2007 Updated, HECO T-7 and T-10.

	A	B	C	D	E	F	G	H
	2004 Recorded EOY*	2004 Average	2005 Recorded EOY	2005 Average	2006 YTD Recorded 9/30/06	2006 Projected EOY	Updated 2007 EOY Test Year	Updated 2007 TEST YEAR AVERAGE
<b>President's Office</b>								
Corporate Audit & Compliance (Formerly Internal Audit)	6	6	11	8	11	9	12	12
President's Office	4	3	5	5	2	2	5	5
Subtotal	10	9	16	13	13	11	17	17
<b>VP-Corporate Excellence</b>								
Compensation & Benefits	14	14	13	14	12	13	15	15
Industrial Relations	9	9	9	9	9	9	9	9
Safety, Security & Facilities	52	42	44	49	46	42	47	47
Workforce Staffing & Development	17	16	16	17	17	16	17	17
VP-Corporate Excellence's Office	2	2	1	2	2	2	2	2
Subtotal	94	83	83	91	86	82	90	90
<b>VP-Finance</b>								
General Accounting	25	25	26	25	26	26	26	26
Information Technology & Services	90	90	95	94	92	95	94	94
Management Accounting & Fin Svcs	20	21	20	21	22	22	22	22
Risk Management	9	9	9	9	9	9	9	9
Financial VP/Treasurer's Office	3	3	3	3	4	4	3	3
Subtotal	147	148	153	152	153	156	154	154
<b>VP-General Counsel</b>								
Legal	16	14	16	16	15	16	16	16
VP-Gen Counsel's Office	2	2	2	2	2	2	2	2
Subtotal	18	16	18	18	17	18	18	18
<b>Sr. VP-Energy Solutions*</b>								
Customer Installations	43	0	49	46	46	44	53	53
Energy Projects	8	0	9	9	8	8	9	9
Technology	2	0	3	3	3	3	3	3
Sr. VP-Energy Solutions' Office	4	0	4	4	4	4	4	4
Subtotal	57	99	65	62	61	59	69	69
<b>VP-Customer Solutions*</b>								
Customer Technology Applications	9	0	8	9	8	8	10	10
Energy Services**1	14	0	17	16	16	17	19	19
Forecasts & Research**	9	0	10	10	9	9	10	10
Integrated Resource Planning	4	0	5	4	5	5	6	6
Marketing Services	11	0	12	12	11	11	12	12
VP-Customer Solutions' Office	2	0	2	2	2	2	2	2
Subtotal	49	46	54	53	51	52	59	59
<b>Sr. VP-Operations</b>								
Customer Service	126	118	130	129	125	126	133	131
Sr. VP-Operations' Office	2	2	3	2	3	3	3	3
Subtotal	128	120	133	131	128	129	136	134
<b>VP-Energy Delivery</b>								
Construction & Maintenance	219	213	215	218	209	218	220	220
Engineering	79	79	86	85	85	84	85	85
Support Services	81	76	80	80	77	81	85	85
System Operation	100	96	112	107	108	105	117	117
VP-Energy Delivery's Office	2	3	2	2	2	2	2	2
Subtotal	481	467	495	492	481	490	509	509
<b>VP-Power Supply</b>								
Environmental	24	21	22	24	22	22	24	24
Power Supply Engineering (formerly Planning & Engineering)	41	46	41	42	37	40	46	46
Power Supply Operations & Maintenance***	296	275	299	299	306	314	353	353
Power Supply Services***	32	18	30	31	29	29	35	33
VP-Power Supply 's Office	2	2	2	2	2	2	2	2
Subtotal	395	362	394	398	396	407	460	458
<b>VP-Special Projects</b>	3	3	3	3	3	3	1	1
<b>Sr. VP-Public Affairs</b>								
Governmental Relations	3	3	3	3	3	2	3	3
Sr. VP-Public Affairs' Office	2	2	2	2	3	3	2	2
Subtotal	5	5	5	5	6	5	5	5
<b>VP-Corporate Relations</b>								
Corporate Communications	9	9	10	10	8	8	10	10
VP-Corporate Relations' Office	2	2	2	2	3	3	2	2
Subtotal	11	11	12	12	11	11	12	12
<b>VP-Government &amp; Community Affairs</b>								
Education & Consumer Affairs	6	6	8	7	8	8	8	8
Regulatory Affairs	5	5	7	7	7	7	15	11
VP-Gov't & Comm Affairs' Office	7	5	7	7	7	7	7	7
Subtotal	18	16	22	21	22	22	30	26
<b>Company Total</b>	<b>1416</b>	<b>1385</b>	<b>1453</b>	<b>1451</b>	<b>1428</b>	<b>1445</b>	<b>1560</b>	<b>1552</b>

\* 2004 Recorded EOY counts reflect reorganizations that occurred in 2004 after the 2005 test year filing; only process area averages are available

\*\* Employee counts have been adjusted to exclude employees covered under the DSM surcharge adjustment docket from all years

1 Updated to reflect D&O 23258: DSM employees previously removed from employee counts are added back

\*\*\* Updated to reflect Production's revised staffing plan as stated in the June 2007 Update, HECO T-6.

\*\*\*\* Updated to reflect retirement of VP-Special Projects as stated in June 2007 Updated, HECO T-7 and T-10



**Ref: Lon K. Okada, HECO T-15, Income Tax Expense, Unamortized Net SFAS 109 Regulatory Asset, Unamortized State Investment Tax Credit, Accumulated Deferred Income Taxes**

Income Tax Expense

The Company will incorporate the effect of the special deduction on dividends paid on qualifying preferred stock as discussed in response to CA-IR-385 when it runs its revenue requirements for settlement/probable entitlement purposes.

Unamortized Net SFAS 109 Regulatory Asset

The unamortized net SFAS 109 regulatory asset balance has been updated due to: 1) actual 2006 recorded balance, 2) change in AFUDC equity gross up as further explained in the response to CA-IR-305, and 3) revised 2007 test year estimate of AFUDC. See June 2007 update of HECO-1506, HECO-1507, and CA-IR-305.

Unamortized State Investment Tax Credit ("ITC")

The State ITC has been updated due to: 1) actual 2006 recorded balance, 2) removal of the PV credit since the ownership structure has changed for the Ward PV project, and 3) revised 2007 test year estimate of plant additions. See June 2007 update of HECO-1504.

Accumulated Deferred Income Taxes

Accumulated deferred income taxes have been updated for: 1) actual 2006 recorded balance (also submitted in CA-IR-306), 2) estimated 2006 post year end adjustments, and 3) updated 2007 amounts for certain revised test year estimates of revenue and expenses.

Accumulated deferred income taxes have been changed from the direct testimony filing for: 1) the exclusion of the regulatory asset for AFUDC Equity gross up in CWIP as further explained in the response to CA-IR-305, 2) the full inclusion of TCI in CWIP as further

explained in the response to CA-IR-305, 3) ratemaking adjustments for the reversal of Accumulated Other Comprehensive Income ("AOCI") as explained in direct testimony by Ms. Nanbu in HECO T-10, and 4) the exclusion of deferred taxes on integrated resource planning costs, consistent with HELCO Docket No. 05-0315 .

**HAWAIIAN ELECTRIC COMPANY, INC.**  
**STATE CAPITAL GOODS EXCISE TAX CREDIT**  
**FOR THE YEARS 2006 - 2007**

(\$ Thousand)

	Actual 2006	Updated Test Year 2007
<u>STATE ITC</u>		
1 Beginning Balance	26,481	28,523
2 Amortizations	(1,201)	(1,304)
3 Additions (Net of Recap)	3,198	2,803
4 Post Year Ends	45	
	<hr/>	
5 Ending Balance	28,523	30,022
	<hr/>	
6 Average Balance		29,273

STATE ITC ADDITION

7 Total Plant Additions	121,572	June 2007 update, HECO T-15, page 1
8 Less Land	(823)	
	<hr/>	
	120,749	
9 5 yr avg of Outside Materials & Services	58.0321%	
10 State ITC Base	70,073	
	<hr/>	
11 Capital Goods Excise Tax Credit %	4%	
	<hr/>	
12 Capital Goods Excise Tax Credit	2,803	
	<hr/>	

**HAWAIIAN ELECTRIC COMPANY, INC.**  
**SUMMARY OF DEFERRED INCOME TAX LIABILITY**  
**BALANCES FOR RATE BASE PURPOSES**  
**FEDERAL AND STATE**

(\$ Thousand)

	Direct per HECO-1505 Actual Balance 12/31/2005	Updated Actual Balance 12/31/2005	Actual (incl PYE) 2006 Adds (Amort), Net	2006 Ratemaking Adjustments	Actual (incl PYE) Balance 12/31/2006
Accelerated Depreciation over Straight Line					
1 FEDERAL	61,334	61,334	(1,586)		59,748
2 STATE	7,190	7,191	(316)		6,875
3 Subtotal	68,524	68,525	(1,902)	-	66,623
All Other Items					
4 FEDERAL	81,443	75,848	(53,723)	50,616	72,741
5 STATE	14,598	13,575	(9,715)	9,264	13,124
6 Subtotal	96,041	89,423	(63,438)	59,880	85,865
7 TOTAL	164,565	157,948	(65,340)	59,880	152,488

	Actual (incl PYE) Balance 12/31/2006	Updated 2007 Adds (Amort), Net	2007 Ratemaking Adjustments	Updated Balance 12/31/2007
Accelerated Depreciation over Straight Line				
8 FEDERAL	59,748	(2,845)		56,903
9 STATE	6,875	(280)		6,595
Subtotal	66,623	(3,125)	-	63,498
All Other Items				
10 FEDERAL	72,741	(3,619)	(3,178)	65,944
11 STATE	13,124	(654)	(581)	11,889
Subtotal	85,865	(4,273)	(3,759)	77,833
12 TOTAL	152,488	(7,398)	(3,759)	141,331
13 AVERAGE				146,910

**HAWAIIAN ELECTRIC COMPANY, INC.**  
**SFAS 109 RECONCILIATION**  
**REGULATORY ASSETS AND LIABILITIES**

(\$ Thousand)

	H Actual Balance 12/31/2005	I Actual 2006 Amort	J Actual 2006 Add	K Actual Balance 12/31/2006	L Updated 2007 Amort	M Updated 2007 Add	N Updated Balance 12/31/2007
1 CWIP Equity Transition (#18673100)	1,850	(85)		1,765	(75)		1,690
2 SFAS 109 Flow Through (#18673200)	3,264	(326)		2,938	(326)		2,612
3 Plant Transition (#18673300)	20,459	(1,023)		19,436	(1,023)		18,413
4 AFUDC Equity Gross up (#18673400)	30,280	(893)	2,585	31,972	(935)	3,485	34,522
5* Adjustment for AFUDC Equity Gross up in CWIP	(4,171)		117	(4,054)		(494)	(4,548)
6 Federal ITC (#18673500)	(3,011)	539		(2,472)	487		(1,985)
Excess Deferred Taxes							
7 (#18673110 - Acct 282)	(1,809)	904		(905)	904		(1)
8 (#18673900 - Acct 283)	(1,414)	58		(1,356)	58		(1,298)
9 Subtotal	(3,223)	962	-	(2,261)	962	-	(1,299)
Deficit Deferred Taxes							
10 (#18673120 - Acct 282)	2,216	(111)		2,105	(111)		1,994
11 (#18673190 - Acct 283)	-	-		-	-		-
12 Subtotal	2,216	(111)	-	2,105	(111)	-	1,994
13 TOTAL	47,664	(937)	2,702	49,429	(1,021)	2,991	51,399
13 AVERAGE BALANCE				48,547			50,414

\* - Line 5 represents the adjustments to exclude the AFUDC Equity Gross up still in CWIP.

NOTE: All SFAS 109 assets and liabilities and related taxes have been computed on effective tax rate of 32.8947368% (federal) and 6.0150376% (state).

**HAWAIIAN ELECTRIC COMPANY, INC.**  
**RECONCILIATION OF SFAS 109 REGULATORY**  
**ASSETS/LIABILITIES AND DEFERRED TAXES**

(\$ Thousand)

	A	B	C	D	E
	Regulatory	Federal	State	*	Total
	Asset/Liab	Def Tax	Def Tax		Def Tax
	Balance	Balance	Balance	Other	Balance
	12/31/2007	12/31/2007	12/31/2007	12/31/2007	12/31/2007
Description					
1 CWIP Equity Transition	1,690	(1,429)	(261)		(1,690)
2 SFAS 109 Flow Through	2,612	(2,207)	(404)	(1)	(2,612)
3 Plant Transition	18,413	(15,567)	(2,847)	1	(18,413)
4 CWIP Equity Ongoing	34,522	(29,189)	(5,338)	5	(34,522)
5 Federal ITC	(1,985)	1,678	308	(1)	1,985
6 Excess Accel Depr	(1)	-	-	1	1
7 Excess Deferred Taxes	(1,298)	428	79	791	1,298
8 Deficit Accel Depr	1,994	(658)	(120)	(1,216)	(1,994)
9 Deficit Deferred Taxes	-				-
10 TOTAL **	55,947	(46,944)	(8,583)	(420)	(55,947)

\* Column E amounts represent the net unamortized "base" SFAS 109 adjustments recorded in 1993 related to excess and deferred taxes booked to Reg Ass/Liab. Columns B and C represent the tax "gross up" of these "base" items. Lines 1 through 5 do not have comparable "base" amounts in Column D because their SFAS 109 adjustments only required a tax "gross up". The "base" on which this gross up was calculated resides in either plant in service or unamortized Federal ITC balance sheet accounts. On the other hand, the "base" for lines 6 through 10 were accounted for in the Reg Asset/Liab. Account.

\*\* The total of \$55,947 does not match the total of \$51,399 per HECO-1506 (updated 6-29-07) because of the adjustment for AFUDC Equity Gross up in CWIP.

Column A is from HECO-1506, p. 2 (updated 6-29-07)

Column B is from HECO-WP-1505, pp. 1-2 (updated 6-29-07)

Column C is from HECO-WP-1505, pp. 3-4 (updated 6-29-07)

HAWAIIAN ELECTRIC CO., INC.  
REGULATORY ASSET - AFUDC EQUITY GROSS UP (#18673400)

		Actual 2002	Actual 2003	Actual 2004	Actual 2005	Actual 2006	Update 2007
<b>ORIGINAL</b>							
Beginning Balance		22,774	24,372	25,994	28,552	30,279	31,971
Equity Gross up addition		2,238	2,326	3,328	2,567	2,585	3,485
Amortization		(640)	(704)	(770)	(840)	(893)	(935)
Ending Balance		24,372	25,994	28,552	30,279	31,971	34,521
Average			25,183	27,273	29,416	31,125	33,246
<b>REVISED</b>							
Beginning Balance		22,774	22,694	23,131	24,334	26,108	27,917
Equity Gross up addition		2,238	2,326	3,328	2,567	2,585	3,485
Adjustment							
Add 25% of Current Year	25%	560	582	832	642	646	871
Add 25% of Prior Year 1	25%		560	582	832	642	646
Add 25% of Prior Year 2	25%			560	582	832	642
Add 25% of Prior Year 3	25%				560	582	832
Deduct Current Year	100%	(2,238)	(2,326)	(3,328)	(2,567)	(2,585)	(3,485)
Total Adjustment		(1,679)	(1,185)	(1,355)	48	117	(494)
Amortization		(640)	(704)	(770)	(840)	(893)	(935)
Ending Balance		22,694	23,131	24,334	26,108	27,917	29,973
Difference		1,679	2,864	4,219	4,171	4,054	4,548
<b>Deferred Tax Effect of Reg Asset: AFUDC Equity Gross up Adjustment</b>							
Federal	32.8947%	552	942	1,388	1,372	1,334	1,496
State	6.0150%	101	172	254	251	244	274
Total		653	1,114	1,641	1,623	1,577	1,770

NOTE: This worksheet calculates the amounts of AFUDC Equity Gross up still in CWIP, and the related deferred tax effects.

**HAWAIIAN ELECTRIC CO., INC.**  
**DEFERRED INCOME TAXES**  
**FEDERAL**

LIAB (DR)CR	Actual 12-31-05	Actual 2006	Actual 12-31-06	Estimate 2006 Post Year Ends	Revised 12-31-06	Updated 2007	Updated 12-31-07
28310 State ITC	18,723,396.50	(656,997.22)	(9,380,393.72)	115,009.43	(9,395,403.15)	(492,990.57)	(9,888,393.72)
28311 Unearned Lease	(5,570.77)	1,190.43	(4,380.34)	0.00	(4,380.34)	1,151.45	(3,228.89)
28312 Accrued Vacation	1,079,915.49	135,560.94	1,215,476.43	(68,909.00)	1,146,567.43	(5,060.19)	1,141,507.24
28313 Uncollectible Acct	(164,413.68)	(217,612.42)	(382,026.10)	(54.00)	(382,080.10)	0.00	(382,080.10)
28314 Directors Def Comp	(30,699.97)	772.37	(29,927.60)	0.00	(29,927.60)	657.90	(29,269.70)
28317 Discounted Work Comp	(717,340.52)	(108,501.75)	(825,842.27)	0.00	(825,842.27)	0.00	(825,842.27)
28319 Cap to Construction	27,326,807.17	1,930,158.71	29,256,965.88	(873.00)	29,256,092.88	2,027,848.17	31,283,941.05
28321 Pension	27,137,290.95	(4,683,108.57)	22,454,182.38	0.00	22,454,182.38	(5,825,891.17)	16,628,291.21
28323 Excess Benefit Plan	(457,845.47)	(11,564.14)	(469,409.61)	0.00	(469,409.61)	(4,621.28)	(474,030.89)
28326 Def Exec Comp	(53,922.55)	(3,502.04)	(57,424.59)	0.00	(57,424.59)	0.00	(57,424.59)
28327 Software	(229,032.17)	52,895.71	(176,136.46)	(15,577.00)	(191,713.46)	(397,053.24)	(588,766.70)
28328 G/L ACRS Retirements	6,528,902.07	256,505.97	6,785,408.04	(60,504.00)	6,724,904.04	328,947.00	7,053,851.04
28329 Series U Exp (Bonds)	888.21	(888.21)	(0.00)	0.00	(0.00)	0.00	(0.00)
28330 EICP	(10,377.25)	(7,888.60)	(18,265.85)	0.00	(18,265.85)	0.00	(18,265.85)
28331 CIAC	(14,051,826.76)	(545,158.21)	(14,596,984.97)	(163,749.00)	(14,760,733.97)	(2,382,782.34)	(17,143,516.31)
28332 Customer Advances	(327,834.50)	8,448.00	(319,386.50)	(3,680.00)	(323,066.50)	0.00	(323,066.50)
28333 Capitalized Interest	(14,526,192.46)	(695,650.87)	(15,221,843.33)	6,446.00	(15,215,397.33)	(766,212.06)	(15,981,609.39)
28335 Connection Fees	16,019.85	0.00	16,019.85	0.00	16,019.85	0.00	16,019.85
28336 Nondeductible Interest	108,651.51	(29,473.65)	79,177.86	0.00	79,177.86	0.00	79,177.86
28337 Supplemental Benefits -SERP	(528,723.95)	(80,710.05)	(609,434.00)	0.00	(609,434.00)	(64,637.58)	(674,071.58)
28338 Nondeductible Vacation	(1,084,196.31)	0.00	(1,084,196.31)	0.00	(1,084,196.31)	0.00	(1,084,196.31)
28340 LTIP	(133,406.96)	(50,949.94)	(184,356.90)	0.00	(184,356.90)	0.00	(184,356.90)
28341 Waipahu Baseyard Int	(111,861.55)	0.00	(111,861.55)	0.00	(111,861.55)	0.00	(111,861.55)
28347 Waiu Water Well Pmts	(409,340.04)	21,242.70	(388,097.34)	0.00	(388,097.34)	21,242.70	(366,854.64)
28348 Nonutil Bad Debt	8,047.29	0.00	8,047.29	0.00	8,047.29	0.00	8,047.29
28401 Gen/Auto (& Accidents)	(321,709.95)	125,888.54	(195,821.41)	0.00	(195,821.41)	0.00	(195,821.41)
28403 CWIP Debt Transition	508,052.22	(20,889.45)	487,162.77	0.00	487,162.77	120,891.10	466,271.67
28404 CWIP Equity Trans	1,565,578.43	173,137.41	1,492,441.02	605.00	1,493,046.02	(63,797.96)	1,429,248.06
28405 Iolani Ct Plaza Sale	(74,584.81)	(80,469.77)	(155,054.58)	(346.51)	(155,401.09)	45,308.42	(110,092.67)
28406 Kaonohi Sale	37,751.68	0.00	37,751.68	0.00	37,751.68	0.00	37,751.68
28407 FAS 109 Flow Through	2,758,603.52	(275,857.92)	2,482,745.60	0.00	2,482,745.60	(275,857.92)	2,206,887.68
28408 Plant Transition	17,296,323.51	(864,818.44)	16,431,505.07	0.00	16,431,505.07	(864,818.44)	15,566,686.63
28409 CWIP Equity Net	15,644,495.55	870,569.79	16,515,065.34	0.00	16,515,065.34	1,318,118.59	17,833,183.93
28410 CWIP Equity Grossup	10,040,442.29	474,817.25	10,515,259.54	2,184.00	10,517,443.54	838,928.66	11,356,372.20
28411 CWIP Debt	7,807,840.45	369,242.24	8,177,082.69	0.00	8,177,082.69	629,667.72	8,806,750.41
28412 General/Auto Liability - Legal	(32,960.47)	(12,730.56)	(45,691.03)	0.00	(45,691.03)	0.00	(45,691.03)
28413 Post Retirement Ben	111,091.34	(715,278.43)	(604,187.09)	16,527.00	(587,660.09)	(578,141.78)	(1,165,801.87)
28414 Reg Liab Federal ITC	(2,545,082.99)	455,906.40	(2,089,176.59)	(192.00)	(2,089,368.59)	411,582.43	(1,677,786.16)
28418 IRP & DSM Costs	129,059.35	(140,771.37)	(11,712.02)	1,472.00	(10,240.02)	11,059.65	819.63
28419 Reg Liab Excess 283	(465,398.01)	18,947.35	(446,450.66)	0.00	(446,450.66)	18,947.35	(427,503.31)
28420 Reg Liab Deficit 283	963.74	(963.74)	0.00	0.00	0.00	0.00	0.00
28422 Miscellaneous	(28,511.60)	0.00	(28,511.60)	0.00	(28,511.60)	0.00	(28,511.60)
28427 Prepaid Expenses	565,340.88	78,269.68	643,610.56	0.00	643,610.56	0.00	643,610.56
28430 FMB X Premium	239,276.86	(21,918.73)	217,358.13	0.00	217,358.13	(21,918.73)	195,439.40
28434 EEO Claims	(107,473.07)	99,341.85	(8,131.22)	0.00	(8,131.22)	0.00	(8,131.22)
28435 Differential	1,016,125.29	172,363.12	943,762.17	0.00	943,762.17	(71,683.80)	872,078.37
28436 TIP	(198,307.46)	254,144.45	55,836.99	0.00	55,836.99	0.00	55,836.99
28440 Kalaeloa	(181,499.38)	15,153.83	(166,345.55)	0.00	(166,345.55)	15,153.83	(151,191.72)
28441 Sun Power	577.09	0.00	577.09	0.00	577.09	0.00	577.09
28442 Overhaul	(74,991.33)	11,355.07	(63,636.26)	0.00	(63,636.26)	11,357.62	(52,278.64)
28508 Substation land - Wilder	209.00	(209.00)	0.00	0.00	0.00	0.00	0.00
28512 Revenue Bond Cost Amort	1,236,501.83	(135,414.87)	1,101,086.96	0.00	1,101,086.96	229,855.82	1,330,942.78
28516 Honolulu Harbor Reserve	(239,745.24)	(342,870.14)	(582,615.38)	68,888.00	(513,727.38)	0.00	(513,727.38)
28520 Deferred Comp - restricted stock	12,357.59	49,489.94	61,847.53	0.00	61,847.53	84,210.58	146,058.11
28522 Knapp lawsuit	(6,578.65)	6,578.47	10.18	0.00	(0.18)	0.00	(0.18)
28524 Software (E-business only)	22,527.51	(22,527.51)	0.00	0.00	0.00	0.00	0.00
28526 Emissions Fees	(313,673.39)	(11,598.34)	(325,271.73)	0.00	(325,271.73)	0.00	(325,271.73)
28528 Substation land - Kuliouou	(48,039.88)	12,980.14	(35,059.74)	315.22	(34,744.52)	13,134.14	(21,610.38)
28530 AES Hawaii PPA	(47,987.44)	2,879.27	(45,108.17)	0.00	(45,108.17)	2,879.27	(42,228.90)
28532 CIS Project Costs	(111,599.99)	(182,118.66)	(293,718.65)	0.00	(293,718.65)	0.00	(293,718.65)
28536 Substation land - Queen Emma	(376,061.08)	83,071.50	(292,989.58)	2,210.32	(290,779.26)	92,096.50	(198,682.76)
28538 Rate Case - TY 2005 & 2007	222,272.28	(71,545.40)	150,726.88	38,426.00	189,152.88	191,135.34	380,288.22
28540 Kalaeloa PPA	(70,078.09)	11,135.75	(58,942.34)	0.00	(58,942.34)	7,630.25	(51,312.09)
28542 QUIPS amortization	569,248.38	125,761.60	695,010.00	0.00	695,010.00	125,761.60	820,771.60
28544 OPEB Exec Life	(2,650,482.48)	(248,271.76)	(2,898,754.24)	0.00	(2,898,754.24)	(271,710.22)	(3,170,464.46)
28546 Percentage Repairs Allowance	1,295,258.00	327,724.97	1,622,982.97	1,231,432.00	2,854,414.97	(214,082.53)	2,640,332.44
28548 Capitalized Interest (D&T)	3,849,215.00	404,916.87	4,254,131.87	565,023.00	4,819,154.87	(344,486.23)	4,474,668.64
28550 E-Business hardware	9,645.18	20,919.11	30,564.29	0.00	30,564.29	1,677.67	32,241.96



LIAB (DR)CR	Actual 12-31-05	Actual 2006	Actual 12-31-06	Estimate 2006 Post Year Ends	Revised 12-31-06	Updated 2007	Updated 12-31-07
28554 Substation Land - Palolo		(13,773.92)	(13,773.92)	0.00	(13,773.92)	2,899.77	(10,874.15)
28556 Substation Land - Waianae		(34,148.47)	(34,148.47)	0.00	(34,148.47)	7,317.53	(26,830.94)
28558 Aiea Park Place			0.00	0.00	0.00	(40,805.88)	(40,805.88)
28560 Software - OMS			0.00	0.00	0.00	167,207.71	167,207.71
AOCI - Qualified Pension		(43,242,752.87)	(43,242,752.87)	0.00	(43,242,752.87)	2,400,154.00	(40,842,598.87)
AOCI - NQ Pension	(14,920.34)	(108,665.19)	(123,585.53)	0.00	(123,585.53)	(11,900.00)	(135,485.53)
AOCI - OPEB		(7,776,112.50)	(7,776,112.50)	0.00	(7,776,112.50)	902,475.00	(6,873,637.50)
AOCI - OPEB Exec Life		511,926.32	511,926.32	0.00	511,926.32	(112,877.00)	399,049.32
<b>TOTAL ACCOUNT 283</b>	<b>77,669,612.45</b>	<b>(54,987,212.72)</b>	<b>22,682,399.73</b>	<b>1,604,634.60</b>	<b>24,287,034.33</b>	<b>(3,075,336.55)</b>	<b>21,211,697.78</b>
<b>ACCOUNT 282 DEPR</b>	<b>61,334,780.24</b>	<b>(2,120,299.10)</b>	<b>59,214,481.14</b>	<b>534,712.00</b>	<b>59,749,193.14</b>	<b>(2,844,724.43)</b>	<b>56,904,468.71</b>
<b>TOTAL FEDERAL DEFERRED TAX LIABILITY (before rate case adjustments)</b>	<b>139,004,392.69</b>	<b>(57,107,511.82)</b>	<b>81,896,880.87</b>	<b>2,139,346.60</b>	<b>84,036,227.47</b>	<b>(5,920,060.98)</b>	<b>78,116,166.49</b>
<b>TOTAL ACCOUNT 283</b>	<b>77,669,612.45</b>	<b>(54,987,212.72)</b>	<b>22,682,399.73</b>	<b>1,604,634.60</b>	<b>24,287,034.33</b>	<b>(3,075,336.55)</b>	<b>21,211,697.78</b>
<b>Less Rate Case Adjustments:</b>							
28312 Accrued Vacation	1,079,915.49	135,560.94	1,215,476.43	(68,909.00)	1,146,567.43	(5,060.19)	1,141,507.24
28313 Uncollectible Account	(164,413.68)	(217,612.42)	(382,026.10)	(54.00)	(382,080.10)	0.00	(382,080.10)
28314 Directors Def Comp	(30,699.97)	772.37	(29,927.60)	0.00	(29,927.60)	657.90	(29,269.70)
28317 Discounted Work Comp	(717,340.52)	(108,501.75)	(825,842.27)	0.00	(825,842.27)	0.00	(825,842.27)
28323 Excess Benefit Plan	(457,845.47)	(11,564.14)	(469,409.61)	0.00	(469,409.61)	(4,621.28)	(474,030.89)
28326 Def Exec Comp (Def LTIP)	(53,922.55)	(3,502.04)	(57,424.59)	0.00	(57,424.59)	0.00	(57,424.59)
28330 EICP	(10,377.25)	(7,888.60)	(18,265.85)	0.00	(18,265.85)	0.00	(18,265.85)
28336 Nondeductible Interest	108,651.51	(29,473.65)	79,177.86	0.00	79,177.86	0.00	79,177.86
28337 Supplemental Benefits -SERP	(528,723.95)	(80,710.05)	(609,434.00)	0.00	(609,434.00)	(64,637.58)	(674,071.58)
28338 Nondeductible Vacation	(1,084,196.31)	0.00	(1,084,196.31)	0.00	(1,084,196.31)	0.00	(1,084,196.31)
28340 LTIP	(133,406.96)	(50,949.94)	(184,356.90)	0.00	(184,356.90)	0.00	(184,356.90)
28341 Waipahu Baseyard Int	(111,861.55)	0.00	(111,861.55)	0.00	(111,861.55)	0.00	(111,861.55)
28347 Waiuu Water Well Pmts	(409,340.04)	21,242.70	(388,097.34)	0.00	(388,097.34)	21,242.70	(366,854.64)
28348 Nonutil Bad Debt	8,047.29	0.00	8,047.29	0.00	8,047.29	0.00	8,047.29
28401 Genl/Auto (& Accidents)	(321,709.95)	125,888.54	(195,821.41)	0.00	(195,821.41)	0.00	(195,821.41)
28412 Genl/Auto Legal	(32,960.47)	(12,730.56)	(45,691.03)	0.00	(45,691.03)	0.00	(45,691.03)
28418 IRP & DSM Costs	129,059.35	(140,771.37)	(11,712.02)	1,472.00	(10,240.02)	11,059.65	819.63
28434 EEO Claims	(107,473.07)	99,341.85	(8,131.22)	0.00	(8,131.22)	0.00	(8,131.22)
28436 TIP	(198,307.46)	254,144.45	55,836.99	0.00	55,836.99	0.00	55,836.99
28520 Deferred Comp - restricted stock	12,357.59	49,489.94	61,847.53	0.00	61,847.53	84,210.58	146,058.11
28538 Rate Case - TY 2005 & 2007	222,272.28	(71,545.40)	150,726.88	38,426.00	189,152.88	191,135.34	380,288.22

**HAWAIIAN ELECTRIC CO., INC.**  
**DEFERRED INCOME TAXES**  
**STATE**

11AB (DR)CR	Actual 12-31-05	Actual 2006	Actual 12-31-06	Estimate 2006 Post Year Ends	Revised 12-31-06	Updated 2007	Updated 12-31-07
28310 State ITC	(1,592,836.25)	(112,123.00)	(1,704,959.25)	(2,744.58)	(1,707,703.83)	(90,146.39)	(1,797,850.22)
28311 Unearned Lease	(940.85)	217.86	(722.99)	0.00	(722.99)	210.55	(512.44)
28312 Accrued Vacation	174,464.34	24,788.18	199,252.52	(12,601.00)	186,651.52	(925.29)	185,726.23
28313 Uncollectible Acct	(25,425.28)	(39,791.99)	(65,217.27)	(10.00)	(65,227.27)	0.00	(65,227.27)
28314 Directors Def Comp	(4,711.68)	141.23	(4,570.45)	0.00	(4,570.45)	120.30	(4,450.15)
28317 Discounted Work Comp	(131,170.07)	(19,840.26)	(151,010.33)	0.00	(151,010.33)	0.00	(151,010.33)
28319 Cap to Construction	5,004,992.75	350,390.02	5,355,382.77	0.00	5,355,382.77	370,963.33	5,726,346.10
28321 Pension	4,962,223.54	(856,335.46)	4,105,888.08	0.00	4,105,888.08	(1,065,300.35)	3,040,587.73
28323 Excess Benefit Plan	(79,192.89)	314.42	(78,878.47)	0.00	(78,878.47)	(845.03)	(79,723.50)
28326 Def Exec Comp	(9,861.22)	(640.37)	(10,501.59)	0.00	(10,501.59)	0.00	(10,501.59)
28327 Software	(61,942.30)	28,164.76	(33,777.54)	(2,849.00)	(36,626.54)	(65,420.30)	(102,046.84)
28328 G/L ACRS Retirements	1,181,413.40	49,254.63	1,230,668.03	(4,965.00)	1,225,703.03	60,150.00	1,285,853.03
28329 Series U Exp (Bonds)	162.41	(162.41)	0.00	0.00	0.00	0.00	0.00
28330 EICP	(1,898.00)	(1,442.82)	(3,340.82)	0.00	(3,340.82)	0.00	(3,340.82)
28331 CIAC	(2,777,711.57)	(96,793.08)	(2,874,504.65)	(29,943.00)	(2,904,447.65)	(433,031.02)	(3,337,478.67)
28332 Customer Advances	(59,283.32)	1,544.00	(57,739.32)	(673.00)	(58,412.32)	0.00	(58,412.32)
28333 Capitalized Interest	(2,772,268.40)	(243,218.08)	(3,015,486.48)	1,179.00	(3,014,307.48)	(132,676.31)	(3,146,983.79)
28335 Connection Fees	8,444.14	0.00	8,444.14	0.00	8,444.14	0.00	8,444.14
28336 Nondeductible Interest	19,867.86	(5,389.44)	14,478.42	0.00	14,478.42	0.00	14,478.42
28337 Supplemental Benefits - SERP	(89,328.46)	(11,826.39)	(101,154.85)	0.00	(101,154.85)	(11,819.38)	(112,974.23)
28338 Nondeductible Vacation	(195,605.00)	0.00	(195,605.00)	0.00	(195,605.00)	0.00	(195,605.00)
28340 LTIP	(24,394.45)	(9,316.51)	(33,710.96)	0.00	(33,710.96)	0.00	(33,710.96)
28341 Waipahu Baseyard Int	(20,452.91)	0.00	(20,452.91)	0.00	(20,452.91)	0.00	(20,452.91)
28347 Waiau Water Well Prmts	(76,069.44)	4,285.36	(71,784.08)	0.00	(71,784.08)	3,884.36	(67,899.72)
28401 Genl/Auto (& Accidents)	(58,826.48)	23,019.11	(35,807.37)	0.00	(35,807.37)	0.00	(35,807.37)
28403 CWIP Debt Transition	92,903.11	(3,819.77)	89,083.34	0.00	89,083.34	(3,820.07)	85,263.27
28404 CWIP Equity Trans	286,277.56	(13,373.63)	272,903.93	111.00	273,014.93	(11,665.85)	261,349.08
28405 Iolani Ct Plaza Sale	(1,209.85)	(11,572.04)	(12,781.89)	990.02	(11,791.87)	8,284.93	(3,506.94)
28406 Kaonohi Sale	6,942.61	0.00	6,942.61	0.00	6,942.61	0.00	6,942.61
28407 FAS 109 Flow Through	504,384.75	(50,442.34)	453,942.41	0.00	453,942.41	(50,442.34)	403,500.07
28408 Plant Transition	3,162,783.95	(158,137.41)	3,004,646.54	0.00	3,004,646.54	(158,137.41)	2,846,509.13
28409 CWIP Equity Net	2,860,698.60	159,189.09	3,019,887.69	0.00	3,019,887.69	241,026.16	3,260,913.85
28410 CWIP Equity Grossup	1,835,959.83	86,823.21	1,922,783.04	399.00	1,923,182.04	153,403.31	2,076,585.35
28411 CWIP Debt	1,431,256.12	67,517.97	1,498,774.09	0.00	1,498,774.09	115,138.64	1,613,912.73
28412 General/Auto Liability - Legal	(6,027.01)	(2,328.05)	(8,355.06)	0.00	(8,355.06)	0.00	(8,355.06)
28413 Post Retirement Ben	2,777.20	(133,221.79)	(130,444.59)	3,022.00	(127,422.59)	(105,716.82)	(233,139.41)
28414 Reg Liab Federal ITC	(466,222.88)	83,365.31	(382,857.57)	(35.00)	(382,892.57)	75,260.40	(307,632.17)
28418 IRP & DSM Costs	23,567.28	(25,577.73)	(2,010.45)	269.00	(1,741.45)	2,154.09	412.64
28419 Reg Liab Excess 283	(85,741.30)	3,464.64	(82,276.66)	0.00	(82,276.66)	3,464.64	(78,812.02)
28420 Reg Liab Deficit 283	568.95	(568.95)	0.00	0.00	0.00	0.00	0.00
28422 Miscellaneous	611.03	0.00	611.03	0.00	611.03	0.00	611.03
28427 Prepaid Expenses	103,375.99	14,312.10	117,688.09	0.00	117,688.09	0.00	117,688.09
28430 FMB X Premium	43,754.59	(4,007.97)	39,746.62	0.00	39,746.62	(4,007.97)	35,738.65
28434 EEO Claims	(19,652.15)	18,165.27	(1,486.88)	0.00	(1,486.88)	0.00	(1,486.88)
28435 Differential	167,311.43	4,148.96	171,460.39	0.00	171,460.39	(13,107.83)	158,352.56
28436 TIP	(40,563.69)	50,513.89	9,950.20	0.00	9,950.20	0.00	9,950.20
28440 Kalaheo	4,278.79	5,541.97	9,820.76	0.00	9,820.76	2,770.97	12,591.73
28441 Sun Power	(1,649.28)	1,649.00	(0.28)	0.00	(0.28)	0.00	(0.28)
28442 Overhaul	(13,713.12)	2,076.35	(11,636.77)	0.00	(11,636.77)	2,076.81	(9,559.96)
28508 Substation land - Wilder	(596.00)	596.00	0.00	0.00	0.00	0.00	0.00
28512 Revenue Bond Cost Amort	226,102.58	(24,761.45)	201,341.13	0.00	201,341.13	42,030.57	243,371.70
28514 APPRISE Software	0.00	22,551.00	22,551.00	0.00	22,551.00	0.00	22,551.00
28516 Honolulu Harbor Reserve	(43,839.23)	(62,696.90)	(106,536.13)	12,597.00	(93,939.13)	0.00	(93,939.13)
28520 Deferred Comp - restricted stock	2,259.87	9,049.54	11,309.41	0.00	11,309.41	15,398.43	26,707.84
28522 Knapp lawsuit	(1,203.05)	1,203.50	0.45	0.00	0.45	0.00	0.45
28526 Emissions Fees	(57,357.68)	(2,120.83)	(59,478.51)	0.00	(59,478.51)	0.00	(59,478.51)
28528 Substation land - Kuliouou	(4,423.04)	1,445.66	(2,977.38)	(900.63)	(3,878.01)	2,401.66	(1,476.35)
28530 AES Hawaii PPA	(8,775.00)	526.49	(8,248.51)	0.00	(8,248.51)	526.49	(7,722.02)
28532 CIS Project Costs	(20,406.75)	(33,301.34)	(53,708.09)	0.00	(53,708.09)	0.00	(53,708.09)
28536 Substation land - Queen Emma	(68,765.45)	42,627.42	(26,138.03)	(6,315.20)	(32,453.23)	16,840.42	(15,612.81)
28538 Rate Case - TY 2005 & 2007	40,644.21	(13,082.52)	27,561.69	7,026.00	34,587.69	34,950.28	69,537.97
28540 Kalaheo PPA	(12,813.88)	(207.76)	(13,021.64)	0.00	(13,021.64)	1,395.24	(11,626.40)
28542 QUIPS amortization	104,091.30	(4,710.67)	99,380.63	0.00	99,380.63	(4,710.67)	94,669.96
28544 OPEB Exec Life	(484,657.38)	(45,398.03)	(530,055.41)	0.00	(530,055.41)	(49,683.90)	(579,739.31)
28546 Percentage Repairs Allowance	236,847.00	163,694.98	400,541.98	225,176.00	625,717.98	(46,929.51)	578,788.47
28548 Capitalized Interest (D&T)	724,104.00	104,706.44	828,810.44	(03.31)	932,129.44	(66,809.37)	865,320.07
28550 E-Business hardware	2,276.20	5,072.14	7,348.34	0.00	7,348.34	607.55	7,955.89
28552 Fleming K-1	0.00	0.00	0.00	0.00	0.00	2,154.09	2,154.09

LIAB (DR)/CR	Actual 12-31-05	Actual 2006	Actual 12-31-06	Estimate 2006 Post Year Ends	Revised 12-31-06	Updated 2007	Updated 12-31-07
28554 Substation Land - Palolo		(2,318.65)	(2,318.65)	0.00	(2,318.65)	530.24	(1,988.41)
28556 Substation Land - Waianae		(6,244.26)	(6,244.26)	0.00	(6,244.26)	1,338.06	(4,906.20)
28558 Aiea Park Place			0.00	0.00	0.00	(7,461.61)	(7,461.61)
28560 Software - OMS			0.00	0.00	0.00	30,574.97	30,574.97
AOCl - Qualified Pension		(7,916,250.46)	(7,916,250.46)	0.00	(7,916,250.46)	438,885.00	(7,477,365.46)
AOCl - NQ Pension	(2,728.31)	(19,870.19)	(22,598.50)	0.00	(22,598.50)	(2,176.00)	(24,774.50)
AOCl - OPEB		(1,421,917.72)	(1,421,917.72)	0.00	(1,421,917.72)	165,024.00	(1,256,893.72)
AOCl - OPEB Exec Life		93,609.38	93,609.38	0.00	93,609.38	(20,640.00)	72,969.38
<hr/>							
TOTAL ACCOUNT 283	13,899,634.53	(9,934,275.46)	3,965,359.07	293,051.61	4,258,410.68	(553,907.93)	3,704,502.75
ACCOUNT 282 DEPR	7,190,668.65	(409,111.70)	6,781,556.95	92,799.00	6,874,355.95	(279,895.68)	6,594,460.27
<hr/>							
TOTAL STATE DEFERRED TAX LIABILITY (before rate case adjustments)	21,090,303.18	(10,343,387.16)	10,746,916.02	385,850.61	11,132,766.63	(833,803.61)	10,298,963.02
<hr/>							
TOTAL ACCOUNT 283	13,899,634.53	(9,934,275.46)	3,965,359.07	293,051.61	4,258,410.68	(553,907.93)	3,704,502.75
<hr/>							
<u>Less Rate Case Adjustments:</u>							
28312 Accrued Vacation	174,464.34	24,788.18	199,252.52	(12,601.00)	186,651.52	(925.29)	185,726.23
28313 Uncollectible Account	(25,425.28)	(39,791.99)	(65,217.27)	(10.00)	(65,227.27)	0.00	(65,227.27)
28314 Directors Def Comp	(4,711.68)	141.23	(4,570.45)	0.00	(4,570.45)	120.30	(4,450.15)
28317 Discounted Work Comp	(131,170.07)	(19,840.26)	(151,010.33)	0.00	(151,010.33)	0.00	(151,010.33)
28323 Excess Benefit Plan	(79,192.89)	314.42	(78,878.47)	0.00	(78,878.47)	(845.03)	(79,723.50)
28326 Def Exec Comp (Def LTIP)	(9,861.22)	(640.37)	(10,501.59)	0.00	(10,501.59)	0.00	(10,501.59)
28330 EICP	(1,898.00)	(1,442.82)	(3,340.82)	0.00	(3,340.82)	0.00	(3,340.82)
28336 Nondeductible Interest	19,867.86	(5,389.44)	14,478.42	0.00	14,478.42	0.00	14,478.42
28337 Supplemental Benefits -SERP	(89,328.46)	(11,826.39)	(101,154.85)	0.00	(101,154.85)	(11,819.38)	(112,974.23)
28338 Nondeductible Vacation	(195,605.00)	0.00	(195,605.00)	0.00	(195,605.00)	0.00	(195,605.00)
28340 LTIP	(24,394.45)	(9,316.51)	(33,710.96)	0.00	(33,710.96)	0.00	(33,710.96)
28341 Waipahu Baseyard Int	(20,452.91)	0.00	(20,452.91)	0.00	(20,452.91)	0.00	(20,452.91)
28347 Waiau Water Well Pmts	(76,069.44)	4,285.26	(71,784.08)	0.00	(71,784.08)	3,884.36	(67,899.72)
28348 Nonutil Bad Debt	1,317.69	0.00	1,317.69	0.00	1,317.69	0.00	1,317.69
28401 Genl/Auto (& Accidents)	(58,826.48)	23,019.11	(35,807.37)	0.00	(35,807.37)	0.00	(35,807.37)
28412 Genl/Auto Legal	(6,027.01)	(2,328.05)	(8,355.06)	0.00	(8,355.06)	0.00	(8,355.06)
28434 EEO Claims	(19,652.15)	18,165.27	(1,486.88)	0.00	(1,486.88)	0.00	(1,486.88)
28436 TIP	(40,563.69)	50,513.89	9,950.20	0.00	9,950.20	0.00	9,950.20
28469 IRP & DSM Costs	23,567.28	(25,577.73)	(2,010.45)	269.00	(1,741.45)	2,154.09	412.64
28520 Deferred Comp - restricted stock	2,259.87	9,049.54	11,309.41	0.00	11,309.41	15,398.43	26,707.84
28538 Rate Case - TY 2005 & 2007	40,644.21	(13,082.52)	27,561.69	7,026.00	34,587.69	34,950.28	69,537.97
28544 OPEB Exec Life	(484,657.38)	(45,398.03)	(530,055.41)	0.00	(530,055.41)	(49,683.90)	(579,739.31)
28550 E-Business hardware	2,276.20	5,072.14	7,348.34	0.00	7,348.34	607.55	7,955.89
AFUDC in CWIP	1,080,186.82	125,066.61	1,205,253.43	0.00	1,205,253.43	76,367.16	1,281,620.59
Reg Asset: AFUDC Equity Gross	250,908.84	(7,022.54)	243,886.30	0.00	243,886.30	29,687.82	273,574.12
<hr/>							
STATE DEF'D TAX LIABILITY - OTH	13,571,977.53	(10,013,034.56)	3,558,942.97	298,367.61	3,857,310.58	(633,804.32)	3,203,506.26
STATE DEF'D TAX LIAB - ACCEL DE	7,190,668.65	(409,111.70)	6,781,556.95	92,799.00	6,874,355.95	(279,895.68)	6,594,460.27
<hr/>							
TOTAL STATE DEFERRED TAX LIABILITY (after rate case adjustments)	20,762,646.18	(10,422,146.26)	10,340,499.92	391,166.61	10,731,666.53	(933,700.00)	9,797,966.53
<hr/>							
<div>(316,312.70) (9,714,666.95)</div>							
<hr/>							
<u>RATEMAKING ADJUSTMENT:</u>							
AOCl - Qualified Pension	0.00	(7,916,250.46)	(7,916,250.46)	0.00	(7,916,250.46)	438,885.00	(7,477,365.46)
AOCl - NQ Pension	(2,728.31)	(19,870.19)	(22,598.50)	0.00	(22,598.50)	(2,176.00)	(24,774.50)
AOCl - OPEB	0.00	(1,421,917.72)	(1,421,917.72)	0.00	(1,421,917.72)	165,024.00	(1,256,893.72)
AOCl - OPEB Exec Life	0.00	93,609.38	93,609.38	0.00	93,609.38	(20,640.00)	72,969.38
TOTAL RATEMAKING ADJUSTMEN	(2,728.31)	(9,264,428.99)	(9,267,157.30)	0.00	(9,267,157.30)	581,093.00	(8,686,064.30)
<hr/>							
TOTAL	20,759,917.87	(19,686,575.25)	1,073,342.62	391,166.61	1,464,509.23	(352,607.00)	1,111,902.23

JUNE 2007 UPDATE

**Ref: Gayle T. Ohashi, HECO T-17, Rate Base**

The following updates were made to HECO T-17 including:

- Rate base components and rate base amounts.
- Inclusion of the Asset Retirement Obligation (“ARO”) regulatory asset in rate base.
- Refined method of calculating working cash and lag days.
  - Updates to working cash due to proposed implementation of pension tracking mechanism.
  - Updates to working cash due to proposed implementation of OPEB tracking mechanism.
  - Updates to the revenue tax payment lag days.

**Rate Base**

Certain rate base components have been updated and are shown on page 7. The updated rate base components were provided by the applicable witness and are referenced accordingly. Support and discussion of the updated rate base components are provided by the applicable witness.

**ARO Regulatory Asset**

HECO erroneously excluded the Asset Retirement Obligation (“ARO”) regulatory asset from rate base in direct testimony. This regulatory asset represents HECO’s cost of removal for certain assets as calculated under Financial Accounting Standards Board (“FASB”) Interpretation No. 47, “Accounting for Conditional Asset Retirement Obligation” (“FIN No. 47”), adopted in December 2005. FIN No. 47 and the ARO regulatory asset are further described in the response

to CA-IR-41 and by Mr. Bruce Tamashiro in HECO T-13. There should be no impact on rate base from the adoption of FIN No. 47 and from the recording of the ARO. The net book value of the asset cost related to the ARO, plus the regulatory asset, net of the ARO liability should sum to zero. The related ARO liability reduces the net cost of plant in service as presented in updated HECO-WP-1702 on page 13 and inclusion of this regulatory asset in rate base will result in no impact on rate base from the adoption of FIN No. 47. The test year estimate of the unamortized ARO regulatory asset is \$27,000, as shown on page 10.

### **Working Cash Calculation**

HECO is not updating its working cash estimate at this time but has made refinements to the working cash calculation due to the implementation of the pension and OPEB tracking mechanisms and a change to the revenue tax payment lag. The updated payment lags are shown on page 12. The working cash estimate will be updated upon the finalization of all the updates and the recalculation of the revenue requirement.

### **Pension**

The proposed pension tracking mechanism as discussed by Ms. Patsy Nanbu (T-10) in the June 2007 Update resulted in several changes to the calculation of working cash. Changes include calculating the payment lag for test year pension expense (NPPC) and adjusting the working cash calculation for the pension asset amortization.

The pension tracking mechanism requires HECO to make contributions to the pension plan equal to the NPPC. Therefore, a payment lag of 14 days was calculated for pension expense and included in the updated calculation of the weighted average payment lag for O&M non-labor as shown on page 14. The payment lag for pension expense was determined based on the

anticipated monthly payments that would have been made or will be made upon implementation of the pension tracking mechanism. Details of the pension payment lag study are provided on page 15. However, if the pension tracking mechanism is not implemented, the payment lag for pension expense would be zero as previously submitted in direct testimony on HECO-WP-1706, page 32 and as described in HECO T-17.

The pension tracking mechanism proposes amortization of the pension asset in rate base over a ten year period. Therefore, the pension asset amortization expense is included in the test year revenue requirement and included as a separate component of working cash. The amortization expense is included in working cash with a revenue collection lag consistent with all other items (37 days) and a payment lag of zero. The revenues associated with the amortization expense are not received at the same time the expense is recognized and are subject to the same revenue collection lag as any other item. As stated in HECO T-17, HECO's position is that all revenues should be included in the calculation of working cash needs associated with the revenue collection lag.

The payment lag days for amortization expense is zero. As discussed in HECO T-17, a payment lag occurs when the Company incurs an obligation to pay for an item or service before the Company actually pays for it. Because the amortization expense relates to payment and expense recognition prior to the test year which is captured in the pension asset amount in rate base, HECO has applied a zero day payment lag to the amortization expense as shown on page 16.

The revenue requirement calculation model was also modified to correctly capture the impact of the pension asset amortization expense on income taxes and working cash. The



amortization expense is an operating expense and a deduction in arriving at taxable income in calculating total income taxes. As previously modeled, the tax impact of the amortization expense was reflected in the current income tax expense and included in the calculation of working cash from income taxes. However, the amortization expense should impact deferred taxes instead of current taxes. The revenue requirement modeling was adjusted to remove the tax effects of the amortization expense from the calculation of the current tax expense.

#### OPEB

The proposed OPEB tracking mechanism as discussed by Ms. Patsy Nanbu (T-10) in the June 2007 Update resulted in a change to the payment lag for test year OPEB expense (NPPBC).

The OPEB tracking mechanism requires HECO to make contributions to the OPEB plan equal to the NPPBC. Therefore, a payment lag of 85 days was calculated for OPEB expense and included in the updated calculation of the weighted average payment lag for O&M non-labor as shown on page 14. The payment lag for OPEB expense was determined based on the anticipated quarterly payments that have been made or will be made. Details of the study are provided on page 15. However, if the OPEB tracking mechanism is not implemented the payment lag for OPEB expense would be zero as previously submitted in direct testimony on HECO-WP-1706, page 32 and as described in HECO T-17.

#### Revenue Tax Payment Lag

The revenue tax payment lag days was corrected from 76 days in direct testimony at HECO-WP-1706, page 43, to 66 days as shown on page 17 in this update. Subsequent to the filing of direct testimony, HECO identified three errors in the determination of the PSC tax payment lag days which required correction of the payment lag day calculation.

The first error was that the calculation of the total payment lag days incorrectly added the check clearing lag days to the average service period days. This error resulted in an overstatement of the total PSC tax payment lag days. The calculation was corrected and the format of the calculation was also revised to be consistent with the format used for other working cash components and to clearly illustrate the calculation of the payment lag days and check clearing lag days. This is shown on page 18.

Second, the monthly PSC tax payments made were incorrectly assumed to relate to the tax liability for that particular monthly period. Monthly service periods were then used as a basis of determining the payment lag days for each monthly payment. However, as determined by the Commission in Decision and Order No. 11893 (Docket No. 6999), the payment of a public service company's tax liability is paid in the year to which the liability relates. Also, as noted in the PSC Tax Law in the Hawaii Revised Statutes, Chapter 239, in cases where the total tax liability exceeds \$100,000 the tax is to be paid in 12 equal installments. Therefore, the use of monthly service periods was incorrect as the monthly payments do not represent a payment for doing business in that month. Rather, the monthly payment represents a monthly installment payment of the total tax liability due for doing business in that particular year. The service periods were revised as shown on page 18.

The third error was the use of the actual PSC tax payment amounts made to the State of Hawaii and City & County of Honolulu to determine the weighted average PSC tax payment lag days. The total tax liability for a particular year is not determined until the filing of the annual tax return in April of that year. As the annual tax liability is not known prior to this, the actual monthly installment payments made in January through April are based on estimates. The



monthly installment payments made in May through December are then subsequently adjusted to ensure that the total of the monthly installment payments made during the year equal the tax liability filed in the annual return. Thus, the actual PSC tax payment amounts do not accurately reflect the weighting of payments made to the State of Hawaii and to the City & County of Honolulu. This resulted in a distortion of the calculation of the weighted payment lag days and has been corrected in the working cash calculation.

Hawaiian Electric Company, Inc.  
**Updated Rate Base Components**  
(\$ in thousands)

Investment in Assets	12/31/2006	12/31/2007	Average for 2007	June 2007 Update Reference
Serving Customers				
Net Cost of Plant in Service	1,331,363	1,369,678	1,350,521	p. 8
Property Held for Future Use	517	3,567	2,042	CA-IR-307
Fuel Inventory	53,084	53,084	53,084	CA-IR-214
Materials & Supplies Inventories	12,838	12,838	12,838	HECO-1703
Unamortized Net SFAS 109				
Regulatory Asset	49,429	51,399	50,414	T-15
Pension Asset	68,260	50,549	59,405	T-10
OPEB Amount	0	0	0	T-10
Unamortized System Development Costs	0	4,642	2,321	T-10
Unamortized DSG Regulatory Asset	0	0	0	p. 9
ARO Regulatory Asset	27	26	27	p. 10
<b>Total Investments in Assets</b>	<b>1,515,518</b>	<b>1,545,783</b>	<b>1,530,651</b>	
Funds from Non-Investors				
Unamortized CIAC	164,092	174,174	169,133	p. 11
Customer Advances	1,001	756	879	CA-IR-307
Customer Deposits	6,369	6,827	6,598	T-8
Accumulated Deferred Income				
Taxes	152,488	141,331	146,910	T-15
Unamortized ITC	28,523	30,022	29,273	T-15
Unamortized Gain on Sales	1,582	1,214	1,398	T-10
<b>Total Deductions</b>	<b>354,055</b>	<b>354,324</b>	<b>354,189</b>	

NOTE: Totals may not add exactly due to rounding.

Hawaiian Electric Company, Inc.  
**Net Cost of Plant in Service**  
(\$ in thousands)

	Original Cost	Accum. Depreciation, Removal Reg. Liability, Acc. Retirement Oblig.	Net Plant In Service	June 2007 Update Reference
Recorded Balances - 12/31/06	2,453,556	(1,122,193)	1,331,363	
ESTIMATED CHANGES in 2007:				
Net Plant Additions	121,572		121,572	CA-IR-307
Cost of Removal		5,764	5,764	T-13
Salvage		(236)	(236)	T-13
Depreciation Accrual		(88,785)	(88,785)	T-13
Retirements <sup>1</sup>	(13,005)	13,005	0	T-13
Estimated Balances - 12/31/07	2,562,123	(1,192,445)	1,369,678	
AVERAGE 2007 BALANCE			<b>1,350,521</b>	

NOTE: Totals may not add exactly due to rounding.

<sup>1</sup> Original cost of estimated retirements for the respective year.

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Hawaiian Electric Company, Inc.  
**Unamortized DSG Regulatory Asset**  
(\$ in thousands)

		June 2007 Update <u>Reference</u>
RECORDED BALANCES - 12/31/06	0 (A)	
ESTIMATED CHANGES in 2007:		
DSG Contribution	0	CA-IR-214
Amortization	<u>0</u>	CA-IR-214
ESTIMATED BALANCE - 12/31/07	0 (B)	
AVERAGE 2007 BALANCE	<u><u>0</u></u> [(A)+(B)]/2	

NOTE: Totals may not add exactly due to rounding.

Hawaiian Electric Company, Inc.  
**Unamortized ARO Regulatory Asset**  
(\$ in thousands)

HECO  
Reference

RECORDED BALANCES - 12/31/06	27	(A)
ESTIMATED CHANGES in 2007:		
Accretion & Depreciation	6	
Cost of Removal	(7)	
	<hr/>	
ESTIMATED BALANCE - 12/31/07	26	(B)
AVERAGE 2007 BALANCE	<u>27</u>	$[(A)+(B)]/2$

NOTE: Totals may not add exactly due to rounding.

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Hawaiian Electric Company, Inc.  
**Unamortized Contributions In Aid of Construction**  
(\$ in thousands)

		June 2007 Update <u>Reference</u>
RECORDED BALANCE - 12/31/06	164,092	
ESTIMATED CHANGES in 2007:		
Cash Receipts	11,840	CA-IR-307
In-Kind Receipts	6,467	CA-IR-307
Transfer from Advances	264	CA-IR-307
Amortization	<u>(8,489)</u>	T-13
ESTIMATED BALANCE - 12/31/07	174,174	
AVERAGE 2007 BALANCE	<u><u>169,133</u></u>	

NOTE: Totals may not add exactly due to rounding.

Hawaiian Electric Company, Inc.  
**WORKING CASH ITEMS, 2007**  
(\$ in thousands)

(A) Revenue Collection Lag (Days)	Payment Lag Worksheet Reference	(B) Payment Lag (Days)	(C) Net Collection Lag (Days)	(D) Annual Amount Worksheet Reference	(E) Average Daily Amount - Present (D) / 365	(F) Working Cash Required under Present Rates (C) x (E)	(G) Average Daily Amount - Proposed (D) / 365	(H) Working Cash Required (Provided) under Proposed Rates (C) x (G)
per HECO								
T-8								
WP-1706								
ITEMS REQUIRING WORKING CASH:								
Fuel Purchases	37	p. 1	17	20	Not Updated	-	-	-
O&M Labor	37	p. 8	11	26	Not Updated	-	-	-
O&M Nonlabor	37	JUNE 2007 UPDATE, p. 14.	32	5	Not Updated	-	-	-
Pension Asset Amortization	37	JUNE 2007 UPDATE, p. 16.	0	37	Not Updated	-	-	-
ITEMS PROVIDING WORKING CASH:								
Purchased Power	37	p. 37	39	(2)	Not Updated	-	-	-
Revenue Taxes - Present Rates	37	JUNE 2007 UPDATE, p. 17.	66	(29)	Not Updated	-	-	-
Revenue Taxes - Proposed Rates	37	JUNE 2007 UPDATE, p. 17.	66	(29)	Not Updated	-	-	-
Income Taxes - Present Rates	37	p. 46	40	(3)	Not Updated	-	-	-
Income Taxes - Proposed Rates	37	p. 46	40	(3)	Not Updated	-	-	-

Total WORKING CASH (See NOTE A)

Change in WORKING CASH (See NOTE A)

NOTE A: HECO is not updating its working cash estimate at this time. The working cash estimate will be updated upon the finalization of all the updates and the recalculation of the revenue requirement. The purpose of this schedule is to illustrate the updated payment lag days.

NOTE B: Totals may not add exactly due to rounding.

Hawaiian Electric Company, Inc.  
**Net Cost of Plant in Service**  
(\$ in thousands)

	<u>Original Cost</u>	<u>Accum Deprec</u>	<u>Removal Reg Liability</u>	<u>Acc. Retire. Obligation</u>	<u>Net Plant In Service</u>	<u>June 2007 Update Reference</u>
Recorded Balances - 12/31/06	2,453,556	(959,081)	(163,020)	(92)	1,331,363	
ESTIMATED CHANGES in 2007:						
Net Plant Additions	121,572				121,572	CA-IR-307
Cost of Removal			5,764		5,764	T-13
Salvage			(236)		(236)	T-13
Depreciation Accrual		(88,785)			(88,785)	T-13
Deprec Accrual Reclass related to Cost of Removal <sup>1</sup>		23,882	(23,882)		0	T-13
Accretion of ARO			6	(6)	0	
ARO Retirements			(7)	7	0	
Retirements <sup>2</sup>	(13,005)	13,005			0	T-13
Estimated Balances - 12/31/07	2,562,123	(1,010,979)	(181,375)	(91)	1,369,678	
AVERAGE 2007 BALANCE					<u><u>1,350,521</u></u>	

NOTE: Totals may not add exactly due to rounding.

<sup>1</sup> Represents the amount of removal costs that has been included in the depreciation expense that will be reclassified as a liability for financial statement purposes.

<sup>2</sup> Original cost of estimated retirements for the respective year.



Hawaiian Electric Company, Inc.  
Working Cash Study  
**O&M Non-Labor Payment Lag**

File:

S:\\_Company\RegulatoryAffairs\HECO TY 2007 Rate Case\Test Year Updates – June 2007\T-17 June 2007 Update\T-17 June 2007 Update

Source:

Per Supporting Worksheets

	Test Year Expense (\$000's)	% of Total	Total Payment Lag Days	Weighted Average
	Note A		June 2007 Update HECO T-17, p.15.	
Pension Expense <sup>1</sup>	\$13,161	11%	14	2 days
OPEB Expense <sup>2</sup>	\$5,449	5%	85	4 days
			HECO-WP-1706, p. 33-36	
Emission Fees <sup>3</sup>	\$838	1%	306	2 days
EPRI Dues <sup>4</sup>	\$1,608	1%	-7	days
Other Non-Labor O&M <sup>5</sup>	\$97,033	82%	30	25 days
	<u>\$118,090</u>	<u>100%</u>		
<b>O&amp;M Non-Labor Payment Lag</b>				<b>32 days</b>

NOTE: Totals may not add exactly due to rounding.

Note A

<sup>1</sup> Pension expense estimate based on 2007 Pension Accrual of \$18,029k (per HECO-1203) x 73% (based on 2005 % of Employee Benefits charged to O&M expense).

<sup>2</sup> OPEB expense estimate based on 2007 OPEB expense of \$7,465k (per HECO-1201) x 73% (based on 2005 % of Employee Benefits charged to O&M expense).

<sup>3</sup> Emission Fees per HECO T-6.

<sup>4</sup> EPRI Dues per HECO-1304

<sup>5</sup> Other Non-Labor O&M = Total O&M Non-Labor expense of \$118,090k, less other items noted above. Total O&M non-labor expense presented here has not been updated from the original estimate filed in direct testimony.

Hawaiian Electric Company  
Working Cash Study  
**Pension & OPEB Payment Lag**

File: S:\\_Company\RegulatoryAffairs\HECO TY 2007 Rate Case\Test Year Updates - June 2007\T-17 June 2007 Update\T-17 June 2007 Update p.14-15 Non-Labor OM.xls\Pension\_OPEB Payment Lag  
Source: 2007 Payments and forecast payments. Information per Treasury wire transfer files.

**PENSION**

	SERVICE PERIOD		AVE SERVICE PERIOD (DAYS)	PAYMENT DATE <sup>1</sup>	END DATE TO PAY DATE (DAYS)	PAYMENT LAG DAYS
	BEGIN	END				
January	1/1/07	1/31/07	15.5	1/31/07	(0.5)	15.0
February	2/1/07	2/28/07	14.0	2/28/07	(0.5)	13.5
March	3/1/07	3/31/07	15.5	3/30/07	(1.5)	14.0
April	4/1/07	4/30/07	15.0	4/30/07	(0.5)	14.5
May	5/1/07	5/31/07	15.5	5/31/07	(0.5)	15.0
June	6/1/07	6/30/07	15.0	6/29/07	(1.5)	13.5
July	7/1/07	7/31/07	15.5	7/31/07	(0.5)	15.0
August	8/1/07	8/31/07	15.5	8/31/07	(0.5)	15.0
September	9/1/07	9/30/07	15.0	9/28/07	(2.5)	12.5
October	10/1/07	10/31/07	15.5	10/31/07	(0.5)	15.0
November	11/1/07	11/30/07	15.0	11/30/07	(0.5)	14.5
December	12/1/07	12/31/07	15.5	12/28/07	(3.5)	12.0

**Pension Payment Lag**

**14.1**

**OPEB**

	SERVICE PERIOD		AVE SERVICE PERIOD (DAYS)	PAYMENT DATE <sup>2</sup>	END DATE TO PAY DATE (DAYS)	PAYMENT LAG DAYS	INVOICE (\$) <sup>3</sup>	WEIGHTED AVERAGE
	BEGIN	END						
January	1/1/07	1/31/07	15.5	3/30/07	57.5	73.0	56,250	4,106,250
February	1/1/07	1/31/07	15.5	6/29/07	148.5	164.0	589,736	96,716,650
	2/1/07	2/28/07	14.0	3/30/07	29.5	43.5	56,250	2,446,875
March	2/1/07	2/28/07	14.0	6/29/07	120.5	134.5	589,736	79,319,448
	3/1/07	3/31/07	15.5	3/30/07	(1.5)	14.0	56,250	787,500
April	3/1/07	3/31/07	15.5	6/29/07	89.5	105.0	589,736	61,922,245
	4/1/07	4/30/07	15.0	6/29/07	59.5	74.5	56,250	4,190,625
May	4/1/07	4/30/07	15.0	6/29/07	59.5	74.5	589,736	43,935,307
	5/1/07	5/31/07	15.5	6/29/07	28.5	44.0	56,250	2,475,000
June	5/1/07	5/31/07	15.5	6/29/07	28.5	44.0	589,736	25,948,369
	6/1/07	6/30/07	15.0	6/29/07	(1.5)	13.5	56,250	759,375
July	6/1/07	6/30/07	15.0	6/29/07	(1.5)	13.5	589,736	7,961,432
	7/1/07	7/31/07	15.5	9/28/07	58.5	74.0	56,250	4,162,500
August	7/1/07	7/31/07	15.5	12/28/07	149.5	165.0	589,736	97,306,386
	8/1/07	8/31/07	15.5	9/28/07	27.5	43.0	56,250	2,418,750
September	8/1/07	8/31/07	15.5	12/28/07	118.5	134.0	589,736	79,024,580
	9/1/07	9/30/07	15.0	9/28/07	(2.5)	12.5	56,250	703,125
October	9/1/07	9/30/07	15.0	12/28/07	88.5	103.5	589,736	61,037,642
	10/1/07	10/31/07	15.5	12/28/07	57.5	73.0	56,250	4,106,250
November	10/1/07	10/31/07	15.5	12/28/07	57.5	73.0	589,736	43,050,704
	11/1/07	11/30/07	15.0	12/28/07	27.5	42.5	56,250	2,390,625
December	11/1/07	11/30/07	15.0	12/28/07	27.5	42.5	589,736	25,063,766
	12/1/07	12/31/07	15.5	12/28/07	(3.5)	12.0	56,250	675,000
	12/1/07	12/31/07	15.5	12/28/07	(3.5)	12.0	589,747	7,076,960
							<u>7,751,839</u>	<u>657,585,363</u>

**OPEB Payment Lag**

**84.8**

<sup>1</sup> HECO is currently not making pension payments however, is anticipating making monthly payments upon adoption of the pension tracking mechanism. Dates listed are the dates the pension payments would have been or will be wired if the pension tracking mechanism is implemented.

<sup>2</sup> HECO is currently making quarterly OPEB payments. Dates listed are the dates in the test year the OPEB payment was wired or is scheduled to be wired.

<sup>3</sup> As noted in footnote 2 above, OPEB payments are made quarterly. However, OPEB expense is recognized monthly. In order to capture the appropriate payment lag days the amounts shown in this column represent the portion of the quarterly payment recognized in the that service period. Therefore, the sum of the amounts with the same payment date represent the total quarterly payment made.

Hawaiian Electric Company, Inc.  
Working Cash Study  
**Pension Amortization Payment Lag**

File: S:\\_Company\RegulatoryAffairs\HECO TY 2007 Rate Case\Test Year Updates – June 2007\T-17 June 2007 Update\T-17 June 2007 Update p  
Source: Per Supporting Worksheets

	Test Year Expense (\$000's)	% of Total	Total Payment Lag Days	Weighted Average
	Note A			
Pension Amortization <sup>1</sup>	\$5,055	100%	0	.00 days
	\$5,055	100%		
<b>Payment Lag</b>				<b>.00 days</b>

NOTE: Totals may not add exactly due to rounding.

Note A

<sup>1</sup> Pension amortization expense estimate per June 2007 update HECO T-10.

Hawaiian Electric Company, Inc.  
Working Cash Study  
**Revenue Tax Payment Lag**

File: S:\\_Company\RegulatoryAffairs\HECO TY 2007 Rate Case\Test Year Updates -- June 2007\T-17 June 2007 Update\T-17 June 2007 Update p.17-18 Re  
Source: Per Supporting Worksheets

	Effective Rate	% of Total	Total Payment Lag Days	Weighted Average
			June 2007 Update HECO T-17, p.18.	
Public Service Company Tax	5.885%	66%	(1)	-1 days
			HECO-WP-1706, p. 45	
Franchise Royalty Tax	2.500%	28%	214	60 days
Public Utility Commission Fees	0.500%	6%	112	6 days
	8.885%	100%		
<b>Revenue Tax Payment Lag</b>				<b>66 days</b>

NOTE: Totals may not add exactly due to rounding.

References:

Tax Rates: Current Revenue Tax rates

Hawaiian Electric Company  
Working Cash Study  
**Revenue Tax Payment Lag**

File: S:\Company\RegulatoryAffairs\HECO TY 2007 Rate Case\Test Year Updates - June 2007\T-17 June 2007 Update\T-17 June 2007 Update p.17-18 Revenue Taxes.xls\Summary  
Source: 2005 Payments. Information per Ellipse.

**PUBLIC SERICE COMPANY (PSC) TAX**

SERVICE PERIOD				(A)		(B)		(C) = (A) X (B)			
CITY & COUNTY of HONOLULU	BEGIN	END	AVE SERVICE PERIOD (DAYS)	PAYMENT DATE	END DATE TO PAY DATE (DAYS)	PAYMENT LAG DAYS	DATE CHECK CLEARED	CHECK CLEARING LAG (DAYS)	TOTAL LAG DAYS	INVOICE (\$) (Note 1)	DOLLAR DAYS
PSC Tax - January	1/1/05	12/31/05	182.5	1/4/05	(361.5)	(179.0)	1/12/05	8.0	(171.0)	320	(54,720)
PSC Tax - February	1/1/05	12/31/05	182.5	2/3/05	(331.5)	(149.0)	2/15/05	12.0	(137.0)	320	(43,840)
PSC Tax - March	1/1/05	12/31/05	182.5	3/3/05	(303.5)	(121.0)	3/14/05	11.0	(110.0)	320	(35,200)
PSC Tax - April	1/1/05	12/31/05	182.5	4/7/05	(268.5)	(86.0)	4/13/05	6.0	(80.0)	320	(25,600)
PSC Tax - May	1/1/05	12/31/05	182.5	5/6/05	(239.5)	(57.0)	5/12/05	6.0	(51.0)	320	(16,320)
PSC Tax - June	1/1/05	12/31/05	182.5	6/2/05	(212.5)	(30.0)	6/14/05	12.0	(18.0)	320	(5,760)
PSC Tax - July	1/1/05	12/31/05	182.5	7/6/05	(178.5)	4.0	7/13/05	7.0	11.0	320	3,520
PSC Tax - August	1/1/05	12/31/05	182.5	8/2/05	(151.5)	31.0	8/12/05	10.0	41.0	320	13,120
PSC Tax - September	1/1/05	12/31/05	182.5	8/30/05	(123.5)	59.0	9/13/05	14.0	73.0	320	23,360
PSC Tax - October	1/1/05	12/31/05	182.5	10/4/05	(88.5)	94.0	10/14/05	10.0	104.0	320	33,280
PSC Tax - November	1/1/05	12/31/05	182.5	11/3/05	(58.5)	124.0	11/15/05	12.0	136.0	320	43,520
PSC Tax - December	1/1/05	12/31/05	182.5	12/6/05	(25.5)	157.0	12/13/05	7.0	164.0	320	52,480
										3,840	(12,160)

PSC Tax Payment Lag for C&C of Honolulu (INFO ONLY)

(3.2)

SERVICE PERIOD				END DATE					(A)	(B)	(C) = (A) X (B)
Hawaii State Tax Collector	BEGIN	END	AVE SERVICE PERIOD (DAYS)	PAYMENT DATE	TO PAY		DATE CHECK CLEARED	CHECK CLEARING LAG (DAYS)	TOTAL LAG DAYS	INVOICE (\$ (Note 1)	DOLLAR DAYS
					DATE (DAYS)	PAYMENT LAG DAYS					
PSC Tax - January	1/1/05	12/31/05	182.5	1/4/05	(361.5)	(179.0)	1/13/05	9.0	(170.0)	680	(115,600)
PSC Tax - February	1/1/05	12/31/05	182.5	2/3/05	(331.5)	(149.0)	2/22/05	19.0	(130.0)	680	(88,400)
PSC Tax - March	1/1/05	12/31/05	182.5	3/3/05	(303.5)	(121.0)	3/15/05	12.0	(109.0)	680	(74,120)
PSC Tax - April	1/1/05	12/31/05	182.5	4/7/05	(268.5)	(86.0)	4/19/05	12.0	(74.0)	680	(50,320)
PSC Tax - May	1/1/05	12/31/05	182.5	5/6/05	(239.5)	(57.0)	5/17/05	11.0	(46.0)	680	(31,280)
PSC Tax - June	1/1/05	12/31/05	182.5	6/2/05	(212.5)	(30.0)	6/15/05	13.0	(17.0)	680	(11,560)
PSC Tax - July	1/1/05	12/31/05	182.5	7/6/05	(178.5)	4.0	7/15/05	9.0	13.0	680	8,840
PSC Tax - August	1/1/05	12/31/05	182.5	8/2/05	(151.5)	31.0	8/17/05	15.0	46.0	680	31,280
PSC Tax - September	1/1/05	12/31/05	182.5	8/30/05	(123.5)	59.0	9/15/05	16.0	75.0	680	51,000
PSC Tax - October	1/1/05	12/31/05	182.5	10/4/05	(88.5)	94.0	10/20/05	16.0	110.0	680	74,800
PSC Tax - November	1/1/05	12/31/05	182.5	11/3/05	(58.5)	124.0	11/18/05	15.0	139.0	680	94,520
PSC Tax - December	1/1/05	12/31/05	182.5	12/6/05	(25.5)	157.0	12/16/05	10.0	167.0	680	113,560
										8,160	2,720

PSC Tax Payment Lag for Hawaii State Tax (INFO ONLY)

0.3

12,000 (9,440)

**PSC Tax Payment Lag (incl County & State)**

(C) / (B) (0.8)

**Note 1:**

**PSC Tax Payments**

	Ratio	
County of Honolulu	1.885%	32%
Hawaii State Tax Collector	4.000%	68%
PSC Rate	5.885%	

The PSC Tax rate is 5.885% of which 1.885% is payable to the County of Honolulu and 4% is paid to the Hawaii State Tax Collector in accordance with HRS Section 239-5. The amounts paid to each party are based on a theoretical monthly payment of \$1,000 split according to the ratio determined above. This captures the weighting of payments to the County and the State.